



7496

2426 MIDDLE ROAD, PLANT 2, P. O. BOX 150, ASHTABULA, OHIO 44004 (216) 997-5501

June 20, 1986

Basil G. Constantelos, Director
Waste Management Division
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

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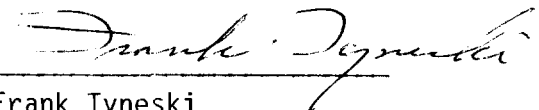
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

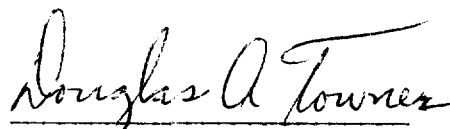
Re: Fields Brook

Dear Mr. Constantelos:

SCM Corporation is submitting herewith a copy of its initial response to the May 16, 1986 request for information. As you will note, most questions have been fully answered and partial responses have been given to other questions. SCM is hereby requesting an extension of time until July 18 within which to complete its response.

SCM has been unable to complete its response within 30 days because the request contains many questions which require SCM to search for and review a large number of documents and provide a considerable amount of information pertaining to the operation of two plants over a period of more than 20 years. Although as you can see from the information set forth in our response, a substantial effort has been made during the past 30 days, this period has been inadequate for our personnel to complete this task.


Frank Tyneski


Douglas A. Towner

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

In the Matter of:)	Amended Response of SCM Corporation
)	to the May 16, 1986 U.S. EPA
FIELDS BROOK)	Request for Information Pursuant
ASHTABULA COUNTY, OHIO)	to Section 104 of the Comprehensive
)	Environmental Response, Compen-
)	sation and Liability Act of 1980,
)	42 U.S.C. §9604, and Section 3007
)	of the Resource Conservation and
)	Recovery Act, 42 U.S.C. §6927.

INTRODUCTORY STATEMENT

SCM Corporation hereby submits this amended and final response to the May 16, 1986 U.S. EPA Request for Information concerning Fields Brook. This response incorporates by reference and treats as being produced herewith documents numbered 1 through 1527 which were previously produced on June 20 and 25, 1986. Because SCM currently operates two plants in Ashtabula, separate certifications are being submitted with respect to each plant.

SCM respectfully objects to this request, as it violates the Paperwork Reduction Act of 1980. Similarly, SCM objects to the individual questions which do not pertain to solid or hazardous wastes or hazardous substances, as they are beyond EPA's information gathering authority under 42 U.S.C. §§6927 and 9604. Without waiving these objections or its rights not to respond to this request, SCM is voluntarily answering this request to the extent set forth herein.

Some of the requests seek a considerable amount of information which has previously been submitted to EPA and/or Ohio EPA. In order to avoid the unnecessary burden of submitting documents which EPA already has and thereby complicating the task of document review and maintenance, SCM is describing some documents but not producing them herewith. If EPA no longer has these documents, SCM will provide the agency with copies of such documents or an opportunity to copy them at EPA's request.

In addition to the above objections, SCM also objects to several of the instructions. SCM objects to requests to provide home addresses of individuals where business addresses are given. SCM objects to the instruction requiring it to provide estimates and its method of estimation where specific responsive information is not available or accessible. SCM objects to instructions requiring it to respond based on information in possession or control of third persons, including retained counsel. In addition, SCM specifically objects to the instructions to the extent that they seek the disclosure of attorney-client privileged communications. SCM also objects to the instructions calling for continuing or correcting responses based on information acquired after the submission of a complete response to the Request.

REQUEST FOR INFORMATION

1) Please provide the date, State of incorporation, registered agent and his address for SCM Corporation (Glidden-Durkee Division) (hereinafter referred to as SCM).

Response:

SCM Corporation was incorporated under the laws of the State of New York on October 30, 1924. Its registered agent is CT Corporation System, 1633 Broadway Ave., New York, New York 10019.

2) Provide the addresses of all facilities that have ever been owned or operated by SCM in the Fields Brook water basin in Ashtabula County, Ohio. If any of the facilities that have been operated by SCM were not at all times of operation owned by SCM, provide the name(s) of the other owner(s) of the facility and a description of each property's location.

Response:

SCM Corporation
Ashtabula Plant 1
2900 Middle Road
P.O. Box 310
Ashtabula, Ohio 44004

SCM Corporation
Ashtabula Plant 2
2426 Middle Road
P.O. Box 160
Ashtabula, Ohio 44004

Plant 2 is comprised of four parcels of land:

- 1) The TiO_2 Plant at 2426 Middle Road
- 2) The TiCl_4 Plant at 1704 State Road

- 3) Vacant land fronting on Middle Road across from the TiO_2 Plant
- 4) Vacant land fronting State Road across from the TiCl_4 Plant

See responses to questions 6 and 8 regarding prior owners and operators of these plants.

3) If any of the property owned by SCM in the Fields Brook water basin has been sold, leased or interests in said property otherwise conveyed by SCM to a third party or by a third party to SCM, state that party's name and the dates of any conveyance or sale.

Response:

SCM purchased Plant 1 from The Sherwin-Williams Company as of October 11, 1974.

SCM purchased Plant 2 from Gulf & Western Industries, Inc., as of July 15, 1983.

4) Provide a legal description of any SCM facilities or property located in the Fields Brook water basin in Ashtabula County, Ohio.

Response:

SCM Plant 1 -- 2900 Middle Road

Situated in the Township of Ashtabula, County of Ashtabula and State of Ohio and known as being part of Lots Nos. Two (2), Three (3), Six (6) and Ten (10) Old Survey and part of Lots Nos. Four (4), Five (5), Eight (8) and Nine (9) of the Erie Tract in said Ashtabula Township and bounded and described as follows:

Beginning at the intersection of the centerline of Middle Road, 60 feet wide, and the centerline of Cook Road, 36 feet wide;

Thence South $0^{\circ} 33' 17''$ West along the centerline of Cook Road 1993.06 feet to the Northwestern right of way line of the New York Central Railroad;

Thence South $69^{\circ} 52' 14''$ West along said Northwestern right of way line 451.32 feet to an angle point on the Westerly line of Lot No. 6 as aforesaid;

Thence South $0^{\circ} 32' 14''$ West along said Westerly line 5.34 feet to a point on the Northwestern right of way line of the New York Central Railroad;

Thence South $69^{\circ} 52' 14''$ West along said Northwestern right of way line 3050.11 feet to the Southeasterly corner of land conveyed to The Cleveland Electric Illuminating Company by Deed dated December 4, 1964 and recorded in Volume 646, Page 137 of Ashtabula County Records of Deeds;

Thence North $36^{\circ} 44' 42''$ West along the Easterly line of land conveyed to The Cleveland Electric Illuminating Company as aforesaid 179.88 feet to the most Northerly corner thereof, said point being on the Easterly line of land conveyed to The Cleveland Electric Illuminating Company by Deed dated May 16, 1964 and recorded in Volume 638, Page 467 of Ashtabula County Records;

Thence North $0^{\circ} 44' 11''$ East along the Easterly line of land conveyed to The Cleveland Electric Illuminating Company as last aforesaid 178.96 feet to the centerline of Middle Road;

Thence North $50^{\circ} 23' 11''$ East along the centerline of Middle Road 1031.88 feet to an angle point;

Thence continuing North $49^{\circ} 40' 00''$ East along the centerline of Middle Road 3433.48 feet to the place of beginning and containing 90.9399 acres of land according to the survey of Glaus Pyle and Schomer Architect and Consulting Engineers dated August 30, 1966 by Joseph T. Maney, Registered Surveyor and recertified by Edward G. Delfs, Registered Surveyor, dated October 8, 1974, be the same more or less but subject to all legal highways.

SCM Plant 2

1. T₁O₂ Plant --
2426 Middle Road

Situated in the Township of Ashtabula, County of Ashtabula, State of Ohio and being part of Lots 7 & 8, Erie Tract;

Beginning at a point in the centerline of Middle Rd. at the Easterly R/W Line of the Penn-Central R.R.;

Thence North $89^{\circ} 27'$ East, along the centerline of Middle Rd., 5.07 feet to a spike in an angle therein;

Thence North $88^{\circ} 40' 45''$ East, along the centerline of Middle Rd., 1127.23 feet to a point in an angle therein;

Thence North $88^{\circ} 09' 45''$ East, along the centerline of Middle Rd., 454.46 feet to a point in the westerly line of land now owned by The Cleveland Electric Illuminating Company;

Thence South $18^{\circ} 27' 30''$ East, along the westerly line of The Cleveland Electric Illuminating Company, 20.87 feet to an iron pin in the southerly line of Middle Rd.; thence in the same course, 187.80 feet to an iron pin in an angle therein;

Thence South $0^{\circ} 03' 30''$ East, along the westerly line of The Cleveland Electric Illuminating Company, 326.00 feet to an iron pin in the northerly R/W line of the Penn-Central R.R.;

Thence Southwesterly along the northerly R/W line of the Penn-Central R.R. by the following courses,

South $69^{\circ} 09'$ West, 107.88 feet to an iron pin;

South $0^{\circ} 05' 30''$ West, 10.70 feet to an iron pin;

South $69^{\circ} 09'$ West, 933.68 feet to an iron pin;

North $20^{\circ} 51'$ West, 5.00 feet to an iron pin;

South $69^{\circ} 09'$ West, 714.57 feet to an iron pin;

South $0^{\circ} 30'$ East, 5.33 feet to an iron pin;

South $69^{\circ} 09'$ West, 251.77 feet to a concrete R.R. monument;

Thence northeasterly along a curve in the easterly R/W line of the Penn-Central R.R., having an angle of $46^{\circ} 41' 20''$, a radius of 758.28 feet, an arc distance of 617.90 feet, a chord bearing and distance of North $22^{\circ} 50' 40''$ East, 595.70 feet to a point in the point of tangent;

Thence North $0^{\circ} 30'$ West, along the easterly R/W line of the Penn-Central R.R., 640.36 feet to an iron pin in the southerly line of Middle Rd.; thence in the same course, 20 feet to the place of beginning and containing 31.70 acres of land.

Subject to and together with all easements of record.

2. TiCl₄ Plant --
1704 State Road

Situated in the Township of Ashtabula, County of Ashtabula, State of Ohio, and being part of the Holmes Tract;

Beginning at a point in the centerline of State Rd., 115 feet northerly from the centerline of Middle Rd., as measured along the centerline of State Rd.

Thence North 0° 39' West, along the centerline of State Rd., 492.47 feet to an iron pin monument in an angle therein;

Thence North 0° 03' 30" West, along the centerline of State Rd., 298.60 feet to a point in the southwest corner of land now owned by Detrex Chemical Industries, Inc.;

Thence South 87° 23' 30" E. along the southerly line of Detrex Chemical Industries, Inc., 30.03 feet to an iron pin in the easterly line of State Rd.; thence in the same course, 1520.22 feet to an iron pin;

Thence South 0° 17' 30" East, 397.85 feet to an iron pin;

Thence South 11° 40' 45" West, 361.47 feet to an iron pin;

Thence South 89° 27' West, parallel with the centerline of Middle Rd., 1401.06 feet to an iron pin;

Thence North 0° 39' West, parallel with the centerline of State Rd., 45 feet to an iron pin;

Thence South 89° 27' West, parallel with the centerline of Middle Rd., 40 feet to an iron pin in the easterly line of State Rd.; thence in the same course, 30 feet to the place of beginning and containing 27.829 acres of land.

Subject to and together with all easements of record.

3. Vacant land fronting on Middle Road
Across from TiO₂ Plant.

Situated in the Township of Ashtabula, County of Ashtabula, State of Ohio, and being part of Lots 5 & 6, Erie Tract;

Beginning at a point in the centerline of Middle Rd. at the southeast corner of land now owned by the General Tire & Rubber Co.;

Thence North 88° 40' 45" East, along the centerline of Middle Rd., 379.50 feet to a point in an angle therein;

Thence North 88° 09' 45" East, along the centerline of Middle Rd., 454.46 feet to a point in the westerly line of land now owned by The Cleveland Electric Illuminating Company;

Thence North 18° 27' 30" West, along the westerly line of The Cleveland Electric Illuminating Company land, 20.87 feet to an iron pin in the northerly line of Middle Rd.; thence in the same course, 1127.57 feet to an iron pin in a southeast corner of the General Tire & Rubber Co. Land.;

Thence South 87° 53" West, along a southerly line of the General Tire & Rubber Co. land, 95.80 feet to an iron pin in the lot line between Lots 5 & 6, Erie Tract;

Thence South 0° 16' East, along the lot line between Lots 5 & 6, Erie Tract, 142.50 feet to an iron pin monument;

Thence South 87° 14' West, along a southerly line of the General Rubber & Tire Co. land, 354.50 feet to an iron pin monument;

Thence South 0° 15' 45" West, along an easterly line of the General Tire & Rubber Co. land, 883.63 feet to an iron pin;

Thence North 89° 44' 15" West, along a southerly line of the General Tire & Rubber Co. land, 16.50 feet to an iron pin;

Thence South 0° 15' 40" West, along an easterly line of the General Tire & Rubber Co. land, 46 feet to an iron pin monument in the northerly line of Middle Rd.; thence in the same course, 20 feet to the place of beginning and containing 14.82 acres of land.

Subject to and together with all easements of record.

4. Vacant land fronting State Road
across from TiCl₄ Plant

Situated in the Township of Ashtabula, County of Ashtabula, State of Ohio and being part of the Holmes Tract;

Beginning at an iron pin in the Ashtabula City-Ashtabula Township Line at the northwest corner of land now owned by Reactive Metals Co.;

Thence North 0° 06' West, along the Ashtabula City-Ashtabula Township Line, 1270.77 feet to an iron pin in an angle therein;

Thence North 0° 43' West, along the Ashtabula City-Ashtabula Township Line, 993.25 feet to an iron pin in the southwest corner of land now owned by The Cleveland Electric Illuminating Company;

Thence North 89° 49' East, along the southerly line of The Cleveland Electric Illuminating Company, 1539.38 feet to an iron pin in the westerly line of State Rd.; thence in the same course, 30 feet to a point in the centerline of State Rd.;

Thence South 0° 29' 15" East, along the centerline of State Rd., 310.40 feet to a point in an angle therein;

Thence South 0° 03' 30" East, along the centerline of State Rd., 1105.17 feet to a point;

Thence South 71° 00' 00" West 31.72 feet to an iron pin in the westerly line of State Rd.; thence in the same course, 739.48 feet to an iron pin;

Thence South 0° 18' 30" East, 239.09 feet to an iron pin;

Thence South 89° 41' 30" West, 103.27 feet to an iron pin;

Thence South 3° 07' East, 358.84 feet to an iron pin;

Thence South 89° 40' West, along a northerly line of Reactive Metals Co., 746.79 feet to the place of beginning and containing 68.30 acres of land.

Subject to and together with all easements of record.

5) Provide copies of any and all documents pertaining to the use and ownership of any SCM facility or property in the Fields Brook water basin in Ashtabula County, Ohio, including, but not limited to, deeds, contracts, leases, subleases, purchase agreements and related correspondence.

Response:

SCM objects to this request, which is beyond the scope of 42 U.S.C. §§6927 and 9604. This request is overly broad and unnecessarily burdensome. SCM is producing herewith the following documents relative to SCM's purchase of Plant 1 from The Sherwin-Williams Company.

- a) October 11, 1974 Agreement of Sale (Document 509-44)
- b) June 5, 1975 Amendment to Agreement of Sale of October 11, 1974 (Document 545-49)
- c) October 11, 1974 Assumption Agreement (Document 550-52)

SCM is also producing herewith the following documents relative to SCM's purchase of Plant 2 from Gulf & Western Industries, Inc.

- a) July 15, 1983 Purchase Agreement (Document 553-608)
- b) Bill of Sale and Assumption of Liabilities (Document 609-12)

A variety of easements exist on the Plant 1 and Plant 2 property.

6) It is U.S. EPA's understanding that SCM acquired a TiO_2 and a TiCl_4 plant (now known as SCM-Plant 2) from Gulf & Western Natural Resources Group. These facilities were located

at State and Middle Roads in Ashtabula County, Ohio. Please provide the following information:

- a) the date of acquisition.
- b) the nature of the acquisition.
- c) the products produced at the facility before and after the acquisition.
- d) SCM's position regarding its assumption of liability for actions arising out of operations at the plant by Gulf & Western Natural Resources Group.
- e) all documents regarding the acquisition, including, but not limited to, contracts, deeds, leases, subleases, purchase agreements and correspondence.
- f) the plant's address.

Response:

- a) July 15, 1983
- b) Purchase of assets
- c) Titanium dioxide was produced at the TiO_2 plant by Gulf & Western before the acquisition and by SCM thereafter.

Titanium tetrachloride was produced at the TiCl_4 plant by Gulf & Western before the acquisition and by SCM thereafter.

The vacant land fronting Middle Road was formerly a farm. The farmhouse was used as a construction office during the construction of the TiO_2 plant. The farm buildings were torn down in the last 1970's. A gravel parking lot for contractors remains on the land.

The vacant land fronting State Road was formerly a golf course.

- d) SCM did not assume liability for releases or threatened releases into the environment arising out of operation at the plant by Gulf & Western Industries, Inc., if any such liability exists.
- e) See response to question No. 5.
- f) See response to question No. 2.

7) Provide a list of all present and former plant managers, production managers and plant engineers at any of the above-described facilities. Please state the dates of their employment with SCM and G & W, positions held and last known address. Also, please indicate the numbered Requests regarding which they may have information.

Response:

ASHTABULA PLANT 1
PLANT MANAGERS

<u>NAME AND ADDRESS</u>	<u>EMPLOYMENT DATES</u>	<u>EMPLOYER</u>
George F. Wyman <small>Non-Responsive</small> [REDACTED]	December 1, 1967 to November 30, 1973	Sherwin-Williams Company
Timothy C. Gillen <small>Non-Responsive</small> [REDACTED]	October 1, 1973 to September 1, 1982	Sherwin-Williams Company & SCM Corp.
Frank Tyneski <small>Non-Responsive</small> [REDACTED]	September 1, 1982 to Present	SCM Corp.

ASHTABULA PLANT 1
PRODUCTION MANAGERS

<u>NAME AND ADDRESS</u>	<u>EMPLOYMENT DATES</u>	<u>EMPLOYER</u>
William W. Shepherd Non-Resonisve [REDACTED]	August 1, 1969 to September 1, 1970	Sherwin-Williams Company
Timothy C. Gillen Non-Resonisve [REDACTED]	September 15, 1970 to September 30, 1973	Sherwin-Williams Company
Frank Tyneski Non-Resonisve [REDACTED]	October 1, 1973 to May 7, 1976	Sherwin-Williams Company & SCM Corp.
Edward M. Conneen, Deceased	August 26, 1976 to November 23, 1984	SCM Corp.
Augustus H. Benning Non-Resonisve [REDACTED]	June 1, 1985 to Present	SCM Corp.

ASHTABULA PLANT 1
MANAGER-MAINTENANCE & PROJECT ENGINEERING

<u>NAME AND ADDRESS</u>	<u>EMPLOYMENT DATES</u>	<u>EMPLOYER</u>
Frank W. Harris c/o Sherwin-Williams Company Non-Resonisve [REDACTED]	August 1, 1969 to May 1, 1973	Sherwin-Williams Company
Harry G. Grieselhuber Non-Resonisve [REDACTED]	June 15, 1973 to May 15, 1976	Sherwin-Williams Company
Frank Tyneski Non-Resonisve [REDACTED]	May 7, 1976 to August 31, 1982	SCM Corp.
Walter C. Flensburg Non-Resonisve [REDACTED]	September 1, 1982 to Present	SCM Corp.

ASHTABULA PLANT 2
PLANT MANAGERS

<u>Name</u>	<u>Dates of Employment</u>	<u>Other Positions Held</u>	<u>Address/Last Known Address</u>
Dr. Thomas H. Goodgame	1/15/63 - 2/22/64		Non-Resonisve
Denis E. O'Mulloy	4/1/64 - 3/1/65		
D. Brittain Briggs	3/15/61 - 9/?/65	Assistant Plant Manager	
Edward J. Holland	2/1/65 (7/1/44) - 8/69	Assistant Manager	
Irwin H. Hess	7/19/67 - 6/1/72	Tech. Dir.; VP & Gen. Mgr.; President	
Fred R. Mohrmann	5/8/63 - 7/13/77	Area Supv.; Prod. Mgr.; Prod. Supt.	
Douglas A. Towner	6/20/66 - present	Engr.; Group Leader; Tech. Mgr.-Titania; Prod. Supt.; Mgr. -Sp. Projects	

PRODUCTION MANAGERS - TiO₂

<u>Name</u>	<u>Dates of Employment</u>	<u>Other Positions Held</u>	<u>Address/Last Known Address</u>
Howard Weaver, Jr.	2/1/63 (12/6/43) - 2/1/72	Prod. Mgr.; Mgr. Proc. Dept.; Proc. Engr. Ch. Class; TiCl ₄ Mfg. Tech. Serv. Rep. Process Engr., TiCl ₄ Tech. Serv. Coordinator	Non-Resonisve
Albert R. Schell, Jr.	3/1/64 - 9/13/65	Pro. Engr.	
Fred R. Mohrmann	(see other listings)		
Douglas A. Towner	(see other listings)		
Ray E. Clark	8/3/64 - present	Shift. Supt.; Prod. Supt.; TiO ₂ Assist. Area Prod. Supt. Assist. Plant Supt.	
Robert L. Suttman	7/22/68 - present	Pro. Eng.; TiO ₂ Tech. Liaison; Area Prod. Supt. Tech. Coordinato Superv. Chem. Engr.; Acting TiO ₂ Superin- tendent; Tech. Supt.	
Ray E. Clark	(see other listings)		
Robert L. Lambert	10/1/80 (2/7/61) - present		

PRODUCTION MANAGERS - TiCl₄

<u>Name</u>	<u>Dates of Employment</u>	<u>Other Positions Held</u>	<u>Address/Last Known Address</u>
Fred R. Mohrmann	(see other listings)		
Michael G. Fowler	7/1/63 (8/29/60) - 4/1/71	Junior Engr.; Prod. Engr.; Area Process Engr.	Non-Resonisve
Ross A. Palmer	6/3/63 - present	TiO ₂ Prod. Shift Supv.; TiCl ₄ Prod. Supr.; Warehouse Foreman; QC/Ware- house/Shipping Foreman	
Lowell W. Johnson	4/1/64 - 7/31/68	TiO ₂ Prod. Engr.; Process Engr.; Sr. Process Engr.	
Michael G. Fowler	(see other listings)		
Barry G. O'Connell	1/2/68 - 6/30/77	TiCl ₄ Prod. Engr.	
Alfred C. Steinbronn	12/1/75 (6/26/61) - present	Operations Manager	
Rodney Shimko	9/12/77 - present	Chem. Engr. I; Sr. Process Engr.	

PLANT ENGINEERS

<u>Name</u>	<u>Dates of Employment</u>	<u>Other Positions Held</u>	<u>Address/Last Known Address</u>
Jack H. Thornton	2/1/63 - 6/30/64		Non-Resonisve
A. V. Dickey	6/1/65 (12/1/57) - 4/30/66	Maint. Supr.; Maint. Supt.	
John H. Nuber	5/1/63 - 5/6/66	Engr.; Assist. Ch. Engr.	
Donald R. Murray	1/20/64 - 10/23/70	Proj. Engr.; Sr Proj. Engr.	
Joseph Romano	3/15/66 - 11/1/70		
John R. Wullschleger	4/20/65 - 2/29/68	M.E.; Gen. Foreman Maint. Supt.	
Paul J. Findlay	1/18/65 - 3/29/74	Engr.; Maint. Supt.	

Messrs. Steinbronn, Tyneski and Towner participated in the preparation of this response. As to the other persons named above, SCM objects to identifying the requests as to which they may have information, since this request calls for speculative information which is unreasonably burdensome and which beyond the scope of 62 U.S.C. §§ 6927 and 9604.

8) Provide the names of any predecessor or successor corporations or partnerships which owned or operated any SCM facility, as described above, in Ashtabula County, Ohio.

Response:

Former owners and operators of Plant 1 are:

Sherwin-Williams Company
101 Prospect Avenue
Cleveland, Ohio 44101

E.I. duPont De Nemours & Company
1007 Market Street
Wilmington, Delaware 19898

Former owners and/or operators of the Plant 2 TiO_2
plant are:

Gulf & Western Industries, Inc.
Gulf & Western Natural Resources Group
New Jersey Zinc Company
Jersey Titanium Company
Cabot Corporation
Cabot Titania, Inc.
Cabot Titania Company
Cabot Corporation (2/3) and
Ruberoid Corporation (1/3)

Former owners and/or operators of the Plant 2 TiCl_4
plant are:

Gulf & Western Industries, Inc.
Gulf & Western Natural Resources Group
New Jersey Zinc Company
Jersey Titanium Company
Cabot Corporation
Cabot Titania, Inc.
Cabot Titania Company
Cabot Corporation (2/3) and
Ruberoid Corporation (1/3)
RMI Company
U.S. Industrial Chemicals Co.
Mallory Sharon
Stauffer Chemical Company

9) On what date did SCM commence operations of its Glidden-Durkee Division facility at or near 2900 Middle Road, Ashtabula, Ohio.

Response:

SCM acquired Plant 1 on October 11, 1974 from The Sherwin-Williams Company.

10) Provide all knowledge or information you may have regarding contamination from your plant(s) entering Fields Brook, or a tributary thereof, either directly or indirectly.

Response:

At all times during SCM's ownership of Plants 1 and 2, NPDES permits have been in effect covering the wastewater discharges into Fields Brook from the wastewater collection and treatment facilities at Plants 1 and 2. In addition, prior owners of these plants also held permits for these discharges. Extensive information describing these discharges have been filed routinely by SCM and the prior owners of these plants with the EPA, Ohio EPA and their respective predecessor agencies. This information pertaining to both routine and non-routine discharges is contained in numerous permit applications, permits, self-monitoring reports, compliance inspection reports, effluent guideline sampling reports, other agency reports, correspondence and other documents. Because this information is extensive and should be contained in EPA's own files, SCM generally objects to the identification and submission of documents and information. If EPA no longer has copies of such documents or cannot otherwise obtain such documents from other sources, SCM will provide EPA with copies

of/or an opportunity to copy, any such documents which are specifically requested and are in SCM's possession. To assist EPA in evaluating the contents of its own files, SCM is voluntarily providing herewith copies of older documents relating to such discharges. See Documents 1-508, 640-1527, and 1561-1709 produced herewith. Also produced herewith are SCM reports of non-routine incidents involving releases that potentially could have reached the wastewater collection system, regardless of whether such releases did in fact reach such system. See Documents 1983-2017.

11) Provide all knowledge or information you may have regarding any property owned by you in Ashtabula County, Ohio, which may have been contaminated by prior owners or users.

Your response should include, but not necessarily be limited to:

- a) names of prior owners or users.
- b) use of facility and property by prior owners or users.
- c) disposal practices of prior owners or users.
- d) volume and nature of sources of such contamination.

Response:

Prior owners of Plants 1 and 2 manufactured the same products at these plants as does SCM presently. These prior owners generated essentially the same wastes as does SCM. They also used the same waste management facilities which SCM now uses. These plants, including certain waste management facilities, were operating and contained wastes when they were acquired by SCM. See responses to questions 35 and 21 for a

description of waste management practices and facilities of prior owners.

SCM currently has not located any specific information regarding contamination of its real property by prior owners or users, except as follows:

1. PCBs were discovered in an overflow trench at the Plant 2 TiCl_4 plant in 1983. The trench was blocked off and contaminated soil was removed from the trench and the adjacent area. The Ohio EPA and EPA were aware of this situation at the time. Attached are Documents 2292-2319 which indicate Ohio EPA's and Gulf and Western's sampling efforts and which summarize the removal and disposal of the contaminated soil.

12) Provide all information you may have regarding any other sources of contamination to Fields Brook.

Response:

SCM objects to this question as being overly broad, unreasonably burdensome and calling for a speculative answer. SCM is aware of numerous publicly available studies and reports of potential sources of contamination with the Fields Brook watershed. Many of which were done by or for EPA or Ohio EPA. In preparing responses to this request, SCM came across Documents 2084-2247 which are being produced because they are older documents possibly not available to EPA presently. The following information is believed not to be reflected in such studies.

- a. Douglas Towner recalls receiving occasional reports that Plant 2 TiCl_4 plant personnel have observed tank trucks stopping at the State Road

bridge over Fields Brook at night and dumping the names of the personnel reporting this information or the dates when such information was received.

- b. Frank Tyneski recalls receiving occasional reports from Plant I personnel taking effluent samples that after heavy rains an oil sheen originating upstream of Plant I has been observed on Fields Brook and in the Conrail railroad track drainage trenches which empty into Fields Brook. He does not recall the names of these personnel or when these reports were received.

13) Provide the following information regarding any sewer lines (including storm, sanitary or combined sewers) or french drains which receive or have received runoff or discharges from the old G & W property (now known as SCM Plant 2) and the property located near 2900 Middle Road, in Ashtabula County, Ohio:

- a) The location and nature of each sewer line.
- b) Whether each sewer line is connected to the main trunk line.
- c) Does any sewer line have direct or indirect access to Fields Brook or a tributary thereof?

Response:

- 1. SCM Plant 1
 - a. The location of existing sewage lines are indicated on the drawings attached (Documents 1533-34):

<u>Number</u>	<u>Date</u>	<u>Description</u>
G 1002	2/20/80	Glaus Pyle and Schomer Sewer and Water Line Plan
7562-6-L15		SCM Plant Layout

b. The inactive barium and strontium carbonate process facilities were shut down by Sherwin Williams in 1972 and later dismantled. At this time, the locker room (Bldg. #6) sanitary fixtures were removed except for wash basins, and the sanitation facility was deactivated. See Drawing G1002. The outflow from the wash basins is tied into the 736 LF 91" x 58" storm sewer flowing north under Middle Road. All catch basins tie into the same storm sewer. The storm sewer picks up run off from south of the railroad tracks. All active plant sanitary fixtures are connected by underground laterals to the treatment plant. All process sewers and process area stormwater sewers lead to the north ditch which in turn leads to the wastewater treatment facilities.

c. Sewer lines have indirect access to Fields Brook via the wastewater treatment facilities.

2. SCM Plant 2

- a. The location of existing sewage lines and drainage are indicated on drawings (Documents 1534-1560 and 1954-1982):

<u>Number</u>	<u>Date</u>	<u>TiO₂ Plant</u>	
		<u>Description</u>	
E-4978-426	07/12/63	Lummus	Underground Piping: Settling Basin Area
E-4978-427		Lummus	Underground Piping: Water Treatment Area
E-4978-428	04/03/63	Lummus	Underground Piping: Boiler and CO Generation Area
E-4978-429		Lummus	Underground Piping: Cl ₂ Recovery, Feed Gas and Oxidation Area
E-4978-430		Lummus	Underground Piping: Wet Aftertreatment, Drying and Packing Areas
E-4978-431		Lummus	Underground Piping: Warehouse and RR Track Areas
E-4978-432		Lummus	Underground Piping: Shop and Electrical Substation Area
E-4978-433		Lummus	Underground Piping: Administration, Lab and Parking Areas
E-4978-434	03/29/63	Lummus	Underground Piping: Middle Road to Fields Brook
E-4978-148A	01/03/63	Lummus	Roads, Grading and Drainage
E-4978-710	06/05/63	Lummus	Finished Grading Plan
D-4978-701	05/15/62	Lummus	Grading Elevations
45-C-2013	07/15/64	Cabot	Sewers from H ₂ SO ₄ Scrubbing System

30-D-2012	04/13/66	Cabot	Underground Piping: Cooling Tower
80-D-2506	12/08/71	McKee	No. 5 Pond
80-D-2507	12/13/71	McKee	Storm Sump PA-473
80-D-2509	12/08/71	McKee	Storm Water Sumps at TiO ₂
80-D-2510	12/27/79	G+W	Drainage Trench - WAT Building
80-D-1505	02/19/72	NJZ	Waste Treatment System
80-D-1506	02/17/72	SCM	Waste Treatment System
30-D-2505	12/30/74	NJZ	Underground Piping: TiO ₂ Area
45-C-2507	07/12/79	G+W	FG-7 and Acid Trench
30-D-2507	05/13/80	G+W	Trench for Lime Pumps
45-D-2513	10/02/81	G+W	Area Trench System - Cl ₂ Recovery
60-D-2180	08/17/84	SCM	Underground Piping - Spray Dryer Area
90-D-2870	05/22/85	SCM	Underground Drainage Plan
45-D-2508			Trenches in Cl ₂ Recovery Area

TiCl₄ Plant

<u>Number</u>	<u>Date</u>		<u>Description</u>
3897-15-D-1501	10/06/71	Cabot	Plot Plan TiCl ₄ Area
10-D-2020	03/06/65	Cabot	Underground Piping: Sanitary and Storm Water
10-D-2036	06/06/66	SCM	Process Trench
10-D-2064	12/27/56	Stauffer	Sanitary Drainage System Details
15-D-2503	10/28/71	Cabot	East Pond
15-D-2504	10/28/71	Cabot	East Sump
15-D-2506	02/09/72	Cabot	North Sump
15-D-2508	02/14/71	Cabot	Trench for Effluent Treatment System

15-D-1501	01/31/72	NJZ	Waste Treatment System
10-D-2529	06/07/79	G+W	Process Trench
10-D-2564	02/23/64	G+W	Process Trench
10-D-2548	12/02/83	G+W	Process Trench
10-D-2552	01/13/84	G+W	Process Trench
10-D-2553	02/01/85	SCM	Process Trench
10-D-2102	06/15/84	SCM	Process Trench
10-D-2555	02/24/84	G+W	GA-510 Sump and Trenches
10-D-2556	02/28/84	G+W	GA-510 Sump and North Trench to Fields Brook
10-D-2566	04/24/84	G+W	Drainage Ditch at Waste Treatment Area
10-D-2568	07/24/84	G+W	North Gate Catch Basin
No Number			Sanitary and Storm Water Piping

- b. All sanitary sewer lines at the TiO_2 unit lead to the aerator and from there to the process wastewater treatment system at the TiCl_4 unit. All sanitary sewer lines at the TiCl_4 unit lead to a trickling filter and from there to the process wastewater treatment system.

All storm sewers at the TiO_2 unit lead to settling ponds. All storm sewers at the TiCl_4 unit lead to the process wastewater treatment system.

All process sewers at the TiO_2 unit are combined and pumped to the wastewater treatment system at the TiCl_4 unit. All process sewers at the TiCl_4 unit lead to the wastewater treatment system.

- c. Sewer lines have indirect access to Fields Brook via the wastewater treatment facilities.

14) Provide the following information regarding any drainage ditches which receive or have received runoff or discharges

from the SCM property located at 2900 Middle Road, in Ashtabula, Ohio:

- a) The location of each drainage ditch.
- b) Whether runoff or discharge from each drainage ditch has direct or indirect access to Fields Brook or a tributary thereof.
- c) Any information regarding the presence, or potential for releases, of hazardous substances or constituents in the ditches.

Response:

- a. The location of existing drainage ditches at SCM Plant 1 are indicated on the attached drawings (Documents 1533-34):

<u>Number</u>	<u>Date</u>	<u>Description</u>
G1002	2/20/80	Glaus Pyle and Schomer Sewer and Water Plan
7562-6-L15		SCM Plant Layout
		- 4933N
		- 3674N
		- 4940N
		- 4490N (north ditch)
		- 4560N

- b. The facilities' main drainage ditch is the North Ditch located at 4490N. See Drawing 7562-6-L15 Run-off from the plant goes to the North Ditch where it is isolated and subsequently pumped via lift station into the process waste and water treatment system and finally discharged into a tributary of Fields Brook; Ditch 3674N. Via the South Ditch, flue pond process water is transferred to Ponds B & A, treated and recycled to the raw water treatment flocculator. This South Ditch will discharge to the Fields Brook only if hydraulic overload conditions occur.
- c. The SCM Spill Prevention Control and Countermeasure (SPCC) Plan, March 25, 1986, describes the potential for spills of hazardous substances and constituents in ditches and the structures and response actions to prevent contamination of the environment.

The SPCC plan is attached as Document 1533.

15) Provide the following information regarding any drainage ditches which receive or have received runoff or discharges from the old G & W property (which is now known as SCM plant 2) located at Middle and State Roads, Ashtabula, Ohio:

- a) The location of each drainage ditch.
- b) Whether runoff or discharge from any drainage ditch has direct or indirect access to Fields Brook or a tributary thereof.
- c) Any information regarding the presence of, or potential for, release of hazardous substances or constituents in the ditches.

Response:

- a. The location of existing drainage ditches at SCM Plant 2 are indicated on the drawings referenced in the response to Question 13.
- b. There is indirect access to Fields Brook via the wastewater treatment system.
- c. The SCM Spill Prevention Control and Countermeasure (SPCC) Plans describe the potential for spills of hazardous substances and constituents and the structures and response actions to prevent contamination of the environment. These SPCC plans are attached as Documents 2265-2291.

16) Does SCM have, or did SCM ever have, an NPDES permit for discharges to Fields Brook or a tributary thereto? Please identify any such permits.

Response:

Yes.

PLANT 1

<u>Permit No.</u>	<u>Effective Date</u>
31000013DD	9-28-84
310000523CD	11-20-78
E-313-BD	7-5-77
E-313-AD	2-6-74 (originally issued to Sherwin Williams)

PLANT 2

<u>Permit No.</u>	<u>Date Issued</u>
31E00017CD	9-28-84
E-317-BD	10-4-78 (originally issued to G&W Natural Resources Group)

17) Did Gulf & Western Natural Resources Group ever have an NPDES permit for discharges to Fields Brook or a tributary thereto? Please identify any such permits.

Response:

Yes.

PLANT 2

<u>Permit No.</u>	<u>Date Issued</u>
31E00017CD	9-28-84
E-317-BD	10-4-78 (originally issued to G&W Natural Resources Group)

18) Describe each manufacturing process that has been operated at all plants owned by SCM at its Ashtabula County, Ohio facilities. For each facility and process provide the years that the operations occurred and all the raw materials associated with or relating to the process.

Response:

PLANT 1

TiO₂ PROCESS DESCRIPTION

(FROM 1969 TO PRESENT)

Titanium dioxide pigment is manufactured in a three-step chloride process. The first involves the conversion of naturally occurring titanium compounds from rutile ore to

titanium tetrachloride by reacting the ore with chlorine in the presence of carbon at elevated temperatures. The titanium tetrachloride is cooled, condensed and purified.

Chlorinated waste solids from this step are concentrated in acidic water for disposal via a private contractor to an off-plant dumping site by means of rubberlined tank trucks. The exhaust gases from this step are stripped of acid forming compounds and any residual chlorine, with the acidic water being used to slurry the waste solids for off-plant disposition. The final exhausts are scrubbed with water which is neutralized and discharged to one of two settling ponds and finally into Fields Brook.

The second step covers the conversion of pure titanium tetrachloride by reacting it with hot oxygen. The chlorine released by this reaction is recirculated back to the process. There are no waste streams for disposal from this step.

The third step takes crude titanium dioxide formed by the oxidation step and processes it by conventional methods to achieve desired pigment properties. The titanium dioxide slurried in water is surface treated and is then filtered, washed, dried, ground and packaged.

The filtrates and wash water are collected in a large settling tank to recover any titanium dioxide present, and the overflow containing dissolved salts (NaSO_4 and NaCl) is neutralized and discharged to two settling ponds. Solids are settled out in these ponds, and a final control is made for pH to insure that all discharges conform to specific limits.

Raw Materials

1. Rutile Ore
2. Sulfuric Acid
3. Chlorine
4. Caustic Soda
5. Nitrogen
6. Oxygen
7. Carbon
8. By-Product HCl

BARIUM AND STRONTIUM PROCESS DESCRIPTION

Prior to SCM's ownership of Plant 1, Sherwin-Williams operated a barium and strontium manufacturing process. SCM did not operate this process.

Strontium or barium carbonate was essentially produced in the same process with changes in operating conditions of manufacturing equipment. Both were converted from ores, celestite for strontium carbonate and barytes for barium carbonate. In manufacturing, either celestite or barytes ore (blended with coke) was reduced in a kiln, then milled prior to a carbon dioxide precipitation-crystallization step. The strontium or barium carbonate product was then separated, washed, dried, screened and packaged.

Principal Raw Materials

1. Celestite Ore or Barytes Ore
2. Coke
3. Soda Ash

PLANT 2

TiO₂/TiCl₄ PROCESS DESCRIPTION

For the period from November 1983 through November 1984 the manufacturing processes were the same as those described in Request 19.

Since November 1984 there have been these changes (the basic process is still very similar):

1. Cl_2 gas from the oxidation section is directly recycled to one chlorinator without a separate Cl_2 recovery step. Because of this less Cl_2 must be vaporized at the TiCl_4 plant.
2. Only about 30-40% of TiCl_4 produced is distilled twice.
3. Some processing equipment at the TiCl_4 plant has more capacity and has some mechanical differences but the basic process and raw materials have not changed.
4. The TiO_2 process does not require the use of purchased AlCl_3 and SiCl_4 . CO is no longer produced. Toluene is used and so is hydrogen peroxide. AlCl_3 is produced from Al pellets.
5. Because there is no Cl_2 recovery step the use of S_2Cl_2 , Freon and paracymene has been discontinued. H_2SO_4 is not used for Cl_2 drying but is still used in surface treatment.
6. A dispersant is used in high density TiO_2 slurries.

The present process is essentially the same as that at Ashtabula I.

19) Describe each manufacturing process that Gulf & Western Natural Resources Group operated at each of its Ashtabula County, Ohio facilities. For each process, provide the years

that the operations occurred and all the new raw materials associated with or relating to the process.

Response:

A description of the manufacturing processes is included in Document 613-32. Gulf & Western operated this process from 1972-1983. The process was the same before that. Document 633-39 contains a list of all raw materials and process aids.

20) Describe any hazardous substances that may have been contained in any by-product or wastes from each of the manufacturing processes described in Requests 18 and 19. Also, describe the amounts of waste, by-products or hazardous substances generated by each of such processes on a yearly basis.

Response:

Plant 1

The chlorinated wastes from the TiO_2 process are primarily acidic by nature. Approximately 45,000 tons of this waste are generated annually which contain approximately 17% HCl, 2000 PPM chromium and 30 PPM lead by weight.

The waste pile from the barium and strontium process is estimated to contain 50,000 YD³ of material. See response to question 35 for additional information.

Plant 2

Prior to December 1984 solid waste from the waste treatment process was generated at a rate of approximately 250 yd³/10⁶ pounds of $TiCl_4$ production. One cubic yard weighs about one ton. On an annual basis this would be approximately 50,000 - 75,000 tons/year. This material is non-hazardous.

Since December 1984 the rate of waste generation has reduced to about $200 \text{ yd}^3/10^6$ pounds of TiCl_4 production or 40,000 - 60,000 tons/year.

Prior to December 1984 the Chlorine Recovery system utilized H_2SO_4 to remove water from gaseous chlorine. H_2SO_4 at 93% was put in the system and removed when H_2SO_4 concentration reached 87%. This H_2SO_4 was sold except in the coldest winter months when the freezing point of 87% H_2SO_4 becomes a problem. At those times it was shipped off-site for neutralization. This amounted to about 200 tons yearly.

Some TiO_2 is carried out of the process in waste water. This is pumped to the treatment unit and is included in the solid waste listed above.

21) Describe the storage, treatment and disposal practices for any by-product or wastes associated with each of the manufacturing processes described in response to Requests 18 and 19. This description should identify any use of drums, tanks, lagoons, ponds, waste piles, ditches, marshes, swamps, land treatment or disposal areas, public sewers, landfills, creeks, or waterways used or affected by such practices.

Response:

Plant 1

Process effluents from the TiO_2 operation are collected in acid brick trenches and the North Ditch and routed to a central neutralization basin. An agitator mixes these streams with sodium hydroxide to neutralize pH. The overflow from the mixing basin flows into two settling ponds (capacity 800,000 gallons each) arranged in series where the water is clarified by settling. The overflow from the settling ponds is into Fields Brook.

Waste solids from chlorination are concentrated in water and stored in two (2) brick-lined tanks (35,000 gallons capacity). Normally this waste is hauled off-site for treatment and disposal by a private contractor. Occasionally, this waste is taken to Plant #2 for treatment as process wastewater.

Based upon past records, Strontium and Barium Carbonate wash waters, filtrates and floor sump liquids were collected into a 10,000 gallon agitated tank. Lime, ferrous sulfate and Burtonite were added (as was required) to adjust acidity (pH) and insure the absence of Strontium or Barium and sulfide ions in solution. This tank overflowed to a second 10,000 gallon agitated tank where further adjustments were possible. This tank was emptied via a pump (operating on a level controller) to a series of retention and settling ponds. The total capacity of these ponds is estimated to be 1,200,000 gallons.

Additionally, barium containing wastes were disposed at the west end of 2900 Middle Road. See response to question 35 for additional information.

See Documents 1529-32 which describe wastewater treatment processes installed and operated by Sherwin Williams. Some additional information about these processes is included in some of the documents produced in response to question 10.

Plant 2

The primary waste constituents are metallic chlorides produced in the chlorination of titanium-bearing ores.

Metallic chlorides, unreacted ore and coke, and other inerts such as refractory materials are sluiced with water and sent through a four-stage neutralization process where the pH is adjusted with hydrated lime. The first three stages are tanks, the fourth is a concrete basin. Neutralized waste is pumped to a 185-ft. diameter thickener which holds about 2 million gallons of water.

Solids settle to a concentration of 6-10% and are pumped to four rotary vacuum filters where they are filtered out. Neutralized solids are then hauled off-site by truck. Solids level is 25-35%. Clarified water overflowing the thickener goes to ponds which provide some further settling time and then to Fields Brook.

Any process water from the TiO_2 plant is collected via a chemical sewer system which is routed to a sump and pumped to the $TiCl_4$ plant where it is combined with $TiCl_4$ plant wastes for treatment.

The TiO_2 plant has five settling ponds which are used for cooling water, storm water run-off, sump overflows, boiler blowdowns, etc.

Gulf + Western followed the same treatment practices generally as SCM. See Documents 1710-1953 and 2248-2263 which describe wastewater treatment processes installed and operated by Gulf + Western and Cabot Corporation.

22) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to any storage, treatment or disposal practices for any by-products or wastes associated with each manufacturing process described in response to Requests 18 and 19.

Response:

Plant 1

NPDES permit monthly monitoring reports prepared since 1974 have been retained.

Manufacturing personnel monitor the discharge from the process waste water settling ponds at 8-hour intervals reporting pH, flow and appearance. Also at eight-hour intervals, laboratory personnel analyze grab samples for suspended solids, pH and chlorine as a check at manhole "D" (settling pond discharge sample prior to final neutralization step). These records are kept for a minimum of 5 years.

Laboratory personnel analyze the chlorinated waste once every eight hours for percent solids. A monthly composite of the chlorinated waste is tested for specific gravity, G/L solids, ash, coke, TiO_2 and HCL. The monthly chlorinated waste volumes have been kept on invoices which date back to 1974.

Since the effective date of the RCRA regulations, hazardous waste manifests have been issued with each load of chlorinated waste, and these manifests have been retained.

Annual hazardous waste reports are retained for several years. See Documents 2320-2344.

Every shipment of by-product HCL off plant site and internal transfer for in-process use are analyzed for percent HCL. Additionally, percent iron is determined for all in-process by-product HCL. These records are kept a minimum of five years.

Based upon available documentation, it appears that the strontium and barium carbonate plant operators and supervisors used to spot check effluent visually and with lead acetate paper every shift. Laboratory analyses were obtained weekly. The laboratory analyses for 1968 are the only remaining records. These analyses are attached as Documents 2022-2039.

Plant 2

Discharge permit monthly monitoring reports prepared since 1963 have been retained.

Strip charts recording flow and pH for wastewater streams for which continuous monitoring has been required are retained for at least three years.

Operating logs and data sheets for wastewater treatment operations are retained for at least three years.

Hazardous waste manifests for hazardous wastes sent off-site for disposal are retained for at least three years.

Annual hazardous waste reports are retained for several years. See Documents 2020-21 and 2040-83.

23) Describe each chemical reclamation process that SCM has operated at its Ashtabula County, Ohio facilities. For each facility and process state the years during which operation of the process occurred, the type of process equipment used, the types of chemicals associated with each reclamation process, the volume processed annually by each process, and the sources of the chemicals.

Response:

None

24) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to the volume and kinds of chemicals received and processed as described in response to Request 23.

Response:

Not applicable

25) Describe the characteristics and the nature of wastes or by-products associated with each reclamation process. Such description should include any characteristic or listing that such waste would likely have under 40 CFR Part 261. The description should also include any hazardous substances the waste would likely contain.

Response:

Not applicable

26) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to the characteristics and nature of the wastes or by-products described in response to Request 25.

Response:

Not applicable

27) Describe the practices and conditions relating to the storage of hazardous wastes or hazardous substances upon their arrival at each of SCM's Ashtabula County, Ohio facilities, until the time of their reclamation. Such a description should include, along with any dates when any significant changes occurred:

- a) what types of wastes were/are stored in drums.
- b) what types of wastes were/are stored in tanks.
- c) what types of containment systems for spills or releases were provided at the storage areas.
- d) the location of any storage areas.
- e) whether drums have been marked with the generator's or transporter's name.
- f) whether hazardous wastes from more than one source were ever mixed or commingled in a tank. How common was this practice? Did this include emptying drums into tanks?
- g) what was the practice regarding the cleanup of spilled materials from these stored hazardous wastes.
- h) did spills or releases (including those caused by fire) of these materials ever occur while they were awaiting processing.
- i) whether such wastes were ever stored in lagoons or ponds.

- j) what types of such wastes were stored in lagoons or ponds.
- k) what type of liner or any other impervious barrier did lagoons or ponds have to prevent the release of materials.
- l) what types of wastes, if any, were ever stored in waste piles.
- m) what records and recordkeeping practices have ever been maintained on storage and what is the state of those records?

Response:

Not applicable

28) Describe SCM's practices relating to the disposal and treatment of still bottoms, sludges and other non-reclaimed materials accumulated in any reclamation process itself.

Please include in such a description, along with the dates for different practices:

- a) whether the non-reclaimed materials were drummed up for disposal.
- b) if such non-reclaimed materials were drummed up, whether they were normally [or necessarily] put back in the drums of the seller from whom they originated.
- c) whether the non-reclaimed material was allowed to accumulate and was stored prior to treatment or disposal.
- d) the locations and types of storage areas used for storage of the non-reclaimed materials. Examples of types of storage areas could include drums, tanks, pits, waste piles, ponds or lagoons.
- e) any containment systems utilized at these storage areas to help prevent releases of the stored material to the environment.

- f) whether any spills or releases of these stored materials ever occurred. Approximately when.
- g) where and how such materials were disposed.
- h) what records and recordkeeping practices have ever been maintained in regard to the above practices. What is the state of those records?

Response:

Not applicable

29) Describe practices relating to any incineration processes used for disposal of wastes for each of SCM's Ashtabula County, Ohio facilities. This description should include:

- a) the location and years during which each incinerator operated.
- b) the rated capacity for each incinerator.
- c) the normal operating and peak temperature for each incinerator.
- d) the rated retention time for materials during the burn.
- e) the type of fuel used to bring the incinerator up to operating capacity.
- f) how the material was fed to the incinerator.
- g) what types of operating records were kept, including temperature and feed rate.
- h) the types of air pollution control devices that were installed on each incinerator and stack test results.
- i) whether any misting or raining from the incinerator stacks ever occurred.
- j) what quantities of incinerator ashes or sludges were generated from the incineration processes.
- k) what types of materials and volumes were burned in these incinerators.

- l) were any PCBs known to have been burned in these incinerators.
- m) did the materials that were burned include non-reclaimable materials from stills.
- n) were materials from stills accumulated and stored prior to incineration.
- o) did the materials sent to SCM include materials sent there solely for purposes of incineration.
- p) were materials sent to SCM for incineration on occasion otherwise disposed. How and why?
- q) how and where were by-products of the incineration process (including ash bottoms, fly ash, sludges and scrubber water) disposed.
- r) any records and recordkeeping practices that have ever been maintained relating to the described practices. What is the state of those records?

Response:

A small incinerator is located in the Plant 1 Administration Building. It has been used since 1968 to the present for destruction of confidential documents and similar material. It has not been used for the destruction of process wastes. The incinerator is registered with the Ohio EPA. Ash is disposed of in off-site landfills.

30) Has SCM ever disposed or arranged for the disposal of any materials in the Reserve Environmental Services, Inc. landfill? If so, please state:

- a) when the disposal occurred.
- b) the nature of the solid and liquid wastes.
- c) whether the wastes contained hazardous substances.
- d) the amount of wastes involved.

- e) if known, where at Reserve's landfill the wastes were disposed.
- f) describe all terms of any arrangement for the disposal of these materials.
- g) what records, if any, have ever been maintained documenting such disposal and arrangements for disposal.

Response:

Yes. Reserve Environmental Services' waste treatment and disposal facilities on Middle Road are outside of the Fields Brook watershed. SCM knows of no materials disposed of by Reserve Environmental Services within the Fields Brook watershed. SCM therefore objects to this question as being irrelevant to the subject matter of this Request.

31) Has SCM ever observed any leachate escaping or being released from any SCM storage or disposal areas on property owned or operated by SCM? If so, describe the location and physical characteristics of the leachate such as color, odor or viscousness. When and by whom has this been observed?

Response:

No.

32) Do you have any information indicating that leachate from the SCM storage or disposal areas on property owned or operated by SCM in Ashtabula County, Ohio may have escaped or been released into surrounding ditches, Fields Brook or a tributary

thereof? If so, please state it, and include when such occurrences took place and who observed them.

Response:

No.

33) Have soil samples been collected and analyzed or monitoring wells ever been installed in or adjacent to the property to monitor for releases of pollutants or hazardous waste constituents? If so, please provide any data you have from such monitoring activities.

Response:

No.

34) Describe any location on SCM property located in the Fields Brook water basin at which wastes from SCM operations have been disposed. Please state the approximate time of disposal, the types of materials, their chemical characteristics and volumes involved. Also, provide any information you have regarding sample analyses that have been conducted of material in or adjacent to any other locations on SCM property in the Fields Brook water basin at which wastes from G & W operations have been disposed.

Response:

None

35) Describe the location and size of each lagoon, pond, waste pile, trench or pit that has existed on the SCM property and its purpose. For each lagoon, pond, waste pile, trench or pit describe:

- a) Any hazardous substances that may be or have been contained in them.
- b) The dates of each structure's existence and use.
- c) Any construction properties of each pit, pond, waste pile, trench or lagoon which would help prevent the release of materials from it.
- d) If not in use now, explain how it was closed or has been modified and the present use of the area.
- e) Any pictures, sketches or maps of these facilities.

Response:

Plant 1

Refer to the attached sketch, "Ashtabula Site Plot Plan," Document 1528, for a map showing the location of the below-listed facilities.

1. Pond. SCM believes that this pond was used by Sherwin-Williams in connection with its barium-strontium operations from 1968 to 1972 when it was closed. Its apparent function was to serve as a temporary holding basin for settling pond dredgings. Its contents have not been sampled. Its estimated size is 200,000 gallons. The manner of its construction and closure is unknown. The pond is located on the highly impermeable clay which exists throughout Plant 1.

2. Settling Pond. This pond was used by Sherwin-Williams for treating wastewater by sedimentation from

its barium-strontium operations from 1968 to 1972 when it was closed. Its capacity is estimated to be 100,000 gallons. It was constructed with an earthen berm and concrete cell dividers. The manner of its closure is unknown. The pond is located on the highly impermeable clay which exists throughout Plant 1. Its contents have not been sampled.

3. Waste Pile. This waste pile was used by Sherwin-Williams for the disposal of wastes from its barium-strontium operations during the period of those operations from 1968-1972. The method of closure is unknown. The method of construction is unknown; however, the pile is located on the highly impermeable clay which exists throughout Plant 1. Its size is estimated to be 50,000 cubic yards. Leachate tests were conducted by SCM on samples from the pile. SCM is unable to locate copies of those test results, except for barium which are listed on Document 2264.

4. North Holding Basin. This is a 4,000,000 gallon pond which is part of the plant's wastewater treatment facilities. It is used for retention of settling pond sediments and as an emergency retention pond for wastewater. It was constructed in 1972 and remains in use. The pond is located over the highly impermeable clay which exists throughout the plant. It has an 18-inch thick firm clay lining on the bottom and sides. The sides are also covered with crushed stone. Sampling data of the contents of this pond have been previously submitted to EPA and Ohio EPA.

5. Holding Basin. This 500,000 gallon pond was used in 1971 and 1972. Its use was the same as the north holding basin. It was excavated out of the highly impermeable clay which exists throughout the plant. It was closed by draining and filling with clay from adjacent areas. Sampling data of the contents of this pond have been previously submitted to EPA and Ohio EPA.

6 and 7. Settling Ponds. These two ponds, each with a capacity of 800,000 gallons, were constructed in 1968 and remain in use for wastewater treatment purposes. The ponds are located over the highly impermeable clay which exists throughout the plant. Each pond has an 18-inch thick firm clay lining on the bottom and sides. The sides are also covered with crushed stone. Sampling data of the contents of these ponds have been previously submitted to EPA and Ohio EPA.

8 and 9. Surge Ponds. These ponds were constructed in 1972 and continue in use to provide collection of raw water (ASHCO) treatment flocculator sediments. The west pond has a capacity of 20,000 gallons. The east pond has a capacity of 70,000 gallons. These bermed ponds were excavated from the highly impermeable clay which exists throughout the plant. They have been sampled but SCM is unable to locate copies of the analysis of those samples.

10. Waste Pile. Dust from the dust collectors on the chlorinator unit are temporarily stored in the southeast corner of the plant prior to off-site disposal. This storage pile was

first used for this purpose in 1969. This pile is located on the highly impermeable clay which exists throughout the plant. The size of the pile varies. The pile consists of ore or coke fines.

Plant 2

Listed below are the ponds, thickener and clarifier located at Plant 2. All ponds have been and are used for wastewater treatment purposes and are located in the highly impermeable clay which underlies Plant 2. Maps showing the location of those ponds are attached. See Document 1974-82.

TiO₂ Area

Pond 1	50' x 135' x 11' Deep	Built - 1963
Pond 2	50' x 135' x 11' Deep	Built - 1963
Pond 3	50' x 135' x 11' Deep	Built - 1963
Pond 4	50' x 135' x 11' Deep	Built - 1963
Pond 5	Northwest Pond 130 x 180 x 9' Deep	Built - 1972

TiCl₄ Area

North Pond	20' x 200' x 13' Deep	Built - 1957
South Pond	20' x 200' x 13' Deep	Built - 1957
Thickener (BG-119)	185 Ft. Diameter x 15' Deep	Built - 1972
East Pond	85' x 90' x 5 Ft. Deep	Built - 1972
Clarifier	22' x 106' x 10'9" Deep	Built - 1967

Sampling data of the contents of the above facilities have been previously submitted to EPA and Ohio EPA.

Filtercake from the neutralization system at the Plant 2 TiCl_4 unit was placed in piles in the northeast portion of the TiCl_4 plant from 1972-77. These piles are located over the highly impermeable clay which exists throughout the plant. These piles are covered with vegetation. See Documents 2018-2019 and 2345-2813 for a description of the contents of these piles and for additional information.

Other drawings produced herewith also show one or more of the above-described facilities at Plants 1 and 2. SCM objects to producing all pictures, sketches and maps of such facilities because it is highly burdensome to locate and produce all such documents and because the documents produced herewith show the location of these facilities.

For additional information regarding the construction and use of wastewater treatment facilities, see the Documents produced in response to question 21.

36) Provide the name of each customer from who SCM has received hazardous substances for purposes of treatment or disposal, including incineration or reclamation. Further, provide any information you have on the kind of waste received, the quantity of each kind of waste received, the processes used by SCM in handling these wastes, the period during which each kind of waste was received and processed and the likely disposition of any residues from that process.

Response:

Not applicable

37) Provide copies of any documents that you now have that contain information indicating the receipt of hazardous wastes for reclamation, incineration, or other treatment by SCM. Such documents would include logs, invoices, bills of lading, purchase orders, work orders, trucking records, correspondence, contracts or other agreements.

Response:

Not applicable

38) Provide the names of all other off-site facilities that have been used by SCM for the disposal of unreclaimed chemical wastes and hazardous wastes, incineration process wastes and manufacturing process wastes. Provide the dates during which such disposal has occurred and the kinds of wastes sent to each facility.

Response:

SCM has not used any off-site facilities located within the Fields Brook watershed for disposal of its wastes. Therefore, this question is irrelevant to the subject matter of this request.

39) Provide any information you have regarding the waste disposal methods utilized by any surrounding property owners or users.

Response:

None

40) Describe any information SCM may have obtained regarding contaminated fill material or debris deposited in or near Fields Brook or its tributaries. Such should include any information regarding fill allegedly disposed by Brenkus Excavating at or near the residence of Sandra Herl, 935 East 19th Street, Ashtabula, Ohio.

Response:

None

41) A list and description of all liability insurance coverage that is or was carried by you or any predecessor or successor corporations or partnerships, including any self-insurance provisions, that relates to hazardous substances and/or the above-referenced sites. Provide copies of all of these insurance policies.

Response:

SCM objects to this question which is outside the scope of 42 U.S.C. §§ 6927 and 9604.

42) Provide any information that you have concerning the disposal of hazardous substances from operations at Reserve Environmental Services, Inc. including:

- a) description of the method of operations at the site (e.g. how drums were rinsed, materials used in drum cleaning, methods of disposal of waste residues from drums, disposal of rinse water, etc.)
- b) the disposal locations used by Reserve Environmental Services for residues, rinse water

and solid wastes generated by their operations. This description should include locations both on and off their properties.

- c) the disposal locations for any drums discarded by the company.
- d) the estimated quantity of drums and waste residue disposed of at each location by the company.
- e) whether the company received drums from persons other than SCM for cleaning.

Response:

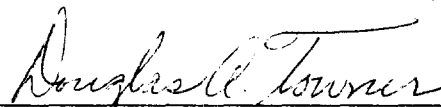
See response to question 30.

September 12, 1986

SCM CORPORATION



Frank Tyneski
Plant Manager
Ashtabula Plant 1



Douglas A. Towner
Plant Manager
Ashtabula Plant 2

As to objections:



Ronald R. Janke
Attorney for SCM Corporation

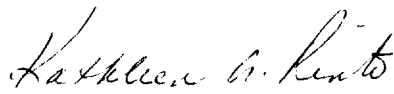
STATE OF OHIO
COUNTY OF ASHTABULA

Douglas A. Towner, being first duly sworn, states that he is an authorized agent of SCM Corporation, that while he does not have personal knowledge of all the facts recited in the foregoing response, information contained herein with respect to Ashtabula Plant 2 has been collected, based upon discussions with knowledgeable SCM personnel and upon a search by SCM employees of those files of SCM Corporation, located in Ashtabula, Ohio, which were believed to have contained responsive information, and is true to the best of his knowledge and belief.



Douglas A. Towner

Sworn to and subscribed before me this 11th day
of September, 1986.



Notary Public

KATHLEEN A. RINTO
Notary Public for the State of Ohio
My Commission Expires March 2, 1989

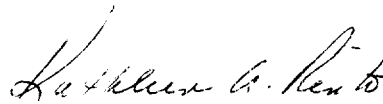
STATE OF OHIO
COUNTY OF ASHTABULA

Frank Tyneski, being first duly sworn, states that he is an authorized agent of SCM Corporation, that while he does not have personal knowledge of all the facts recited in the foregoing response, information contained herein with respect to Ashtabula Plant 1 has been collected, based upon discussions with knowledgeable SCM personnel and upon a search by SCM employees of those files of SCM Corporation, located in Ashtabula, Ohio, which were believed to have contained responsive information, and is true to the best of his knowledge and belief.



Frank Tyneski

Sworn to and subscribed before me this 11th day
of September, 1986.



Notary Public

KATHLEEN A. RINTO
Notary Public for the State of Ohio
My Commission Expires March 2, 1989



CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

CABOT TITANIA CORPORATION ASHTABULA

ASHTABULA, OHIO 44004

August 2, 1967

Mr. G. A. Hall
Engineer-Secretary
Water Pollution Control Board
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

We hereby apply for renewal of permits 1463 and 1824, application forms for which have been completed and are enclosed.

In support of our application, we are enclosing two reports detailing our compliance with the Orders as listed in Dr. Arnold's letter of September 21, 1966.

Yours very truly,

Cabot Titania Incorporated

E. J. Holland
Plant Manager

EJH/pk

SCM

000710

INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO

SUBJECT:

July 17, 1967

To: F. R. Mohrmann
L. W. Johnson
G. T. Collupy - H. Kiskadden

Our permits for "discharge to the waters of the state" for both the $TiCl_4$ plant and the Oxides plant will expire September 7th. We wish to renew our permits of course but in order to do so we must meet the conditions listed on the enclosed letter copies.

Would you please submit to me a report setting out how we have met the requirements of the State Department of Health and how we intend to meet these requirements in the future.

In addition, we should report any actions which we have taken or have planned which would result in our exceeding the minimum requirements as set by the Department of Health. An example of this that comes to mind immediately is Harry Kiskadden's program of daily tests of the effluents from the two plants. Other examples may occur to you as you prepare your reports.

Please let me have your report by the end of this week, the 21st of July. The Water Pollution Control Board is not particularly swift in issuing the permits in any event and we should do nothing to cause them to be further delayed in providing us with the permits.


E. J. Holland

EJH/pk

enc.

SCM

000711

INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

July 20, 1967

IN REPLY TO YOUR LETTER OF

SUBJECT: Water pollution control
Re your memo of 7/17/67

Permit Nos. 1824
1463

TO: E.J. Holland

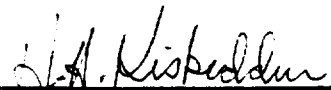
FROM: H.A. Kiskadden

We are currently complying with the sampling, analytical and data reporting procedures outlined by the State and participating in the Ashtabula Township Industrial Association's program of water pollution control. In addition to this, as you know, we are monitoring our effluents for intermittent upsets. In view of this I feel that we are more than meeting State requirements in this area.

Since the regulations regarding discharges into the "Waters of the State" are quite general in nature, it is difficult to assess our standing as to the actual degree of pollution. What can be said, however, is that by comparison with other plants in our immediate area we look good and will look even better when TiCl_4 Unit effluent clarifier is lined out and in full operation.

As for the future, no changes are planned or presently seem necessary for the TiO_2 Unit. At the TiCl_4 Unit minor changes will have to be made in sampling procedures to comply with state requirements when the clarifier is working.

Overall, the TiO_2 Unit has met the requirements with infrequent exceptions. At the TiCl_4 Unit the exceptions have been more frequent but the new clarifier should solve that problem. We should have no problems if we don't relax.


H.A. Kiskadden

HAK:po
cc: GTC

SCM

000712

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location Middle Road, Ashtabula Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1824).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Plant Manager, Ashtabula Facilities

Post Office Address Cabot Titania Incorporated
P. O. Box 160, Ashtabula, Ohio

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this _____ day of _____, 1967,
at Ashtabula, County of Ashtabula And State of _____.

Signature of Officer _____

Official Title _____

GENERAL INSTRUCTIONS

1. *Name of applicant* means municipality, political subdivision, public or private corporation, individual, partnership or other entity.
2. *Location* means municipality or township and county in Ohio.
3. *Type of Establishment* - The classification of the industrial firm, institution, or service entity from which the wastes in question result.
4. *Type of Discharge* means sewage, industrial wastes or other wastes (see Section 6111.01 (B), (C) and (D) R.C.). Mixtures should be so indicated.
5. Identity of the body of water to which discharge is made should be named. The next larger tributary, generally known, also should be named.
6. Treatment insofar as this paragraph is concerned constitutes alteration of polluting constituents of wastes discharged by the reduction of their effect on the receiving waters of the state. If the answer is *Yes* to the question, supplementary information should be submitted to clearly establish the effectiveness of such treatment. If the answer is *No* supplementary information should describe any program of proposed improvements for pollution abatement (see Item 7).
7. Submission of relevant information should be attached and titled *Exhibit A* if no other descriptive title is given. Such supplemental data should set forth the number and location of outlets if more than one is involved; details of present and proposed volume and strength (*variability*) of discharge to be disposed; normalcy with respect to present production and resultant pollution loads; and such other information as may be pertinent to the control, prevention and abatement of pollution.

**Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Flow.**

September 21, 1966

**Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004**

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires September 1, 1967. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of all facilities for the treatment and disposal of sanitary sewage and industrial wastes.
2. The submission to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, of reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. Prompt reporting to the Division of Engineering of the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
4. The submission to the Division of Engineering of information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.


000714

SCM


Cabot Corporation
Titanium Tetrachloride Unit

-4-

September 21, 1966

5. The submission to and approval by the Ohio Department of Health of plans for compliance with the Recommendations and Conclusions of the Lake Erie Conference, with special reference to Sections 12, 13, and 16.
 6. The completion of construction of facilities in accordance with approved plans required by condition No. 5.
 7. The participation in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.
- 

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.9

Certified mail

cc: Health Commissioner
cc: District Office



SCM

000715

State of Ohio

Address Reply to:

G. A. HALL
Engineer-Secretary
450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
BARTON HOLL
SHARON D. BRESLER

Department of Health

Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1967

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires September 1, 1968. Renewal of this permit is contingent upon compliance with the following conditions:

1. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage.
2. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
4. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.

SCM

000716

Cabot Titania Corporation
Titanium Dioxide Unit

-2-

November 13, 1967

5. Participate in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Reports submitted to the Ohio Department of Health indicate that the uncontrolled increments periodically carry relatively high concentrations of suspended solids. Investigation should be instituted to determine the source of these solids and to divert these wastes to treatment devices.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.5

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000717

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1824.5

Date Issued - November 13, 1967

Expiration Date - September 1, 1968

WATER POLLUTION CONTROL BOARD

COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Dioxide Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

000718

SCM

The logo for Cabot Corporation, featuring the word "CABOT" in a stylized font inside a circular emblem.**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

CABOT TITANIA CORPORATION, ASHTABULA

ASHTABULA, OHIO 44004

August 14, 1968

Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus Ohio 43216

Dear Mr. Hall:

We are applying herewith for renewal of Permit No. 1827 for the discharge of industrial wastes and sanitary sewage from the Titanium Dioxide unit into the waters of the State. We have complied with the provisions of the Water Pollution Control Act and with the conditions listed in Dr. Arnold's letter of November 13, 1967.

We have instituted an investigation to determine the source of the solids which appear from time to time in the effluent from the Oxides unit. This investigation is continuing and it will be followed by investigation into means of eliminating the cause of the periodical high concentrations of suspended solids.

Yours very truly,

Cabot Titania Incorporated

E. J. Holland
Plant Manager

EJH/pk

000719

SCM

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1824).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Plant Manager, Ashtabula Facilities

Post Office Address Cabot Titania Incorporated

P. O. Box 160 Ashtabula, Ohio 44004

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to on subscribed in my presence this 14th day of August, 1968,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer Patricia E. Kibbee

Official Title Notary Public, Ashtabula County, Ohio
My Commission Expires July 12, 1963

SCM

INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION
P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

SUBJECT: Water Pollution Control

August 8, 1968

To: E. J. Holland

The effluent from the TiO_2 unit settling ponds is in good control. The ponds are scheduled for cleaning the week of August 12th. The sanitary sewage unit is being checked daily by production and by maintenance once a week.

The total plant effluent, ponds and storm sewer, is monitored for pH and during any upset is adjusted by adding soda ash.

The only area of any problem is in the storm sewers during a storm or from spillage that would go to the storm sewers. This problem is being looked into but may take some major changes in the sewer system. At present there have been two storm sewer drains tied into the chemical sewer.

Except for an infrequent upset or the first of a rain storm, the TiO_2 unit should meet the state requirements.

Ray Clark

RC/pk

SCM

000721

INTEROFFICE CORRESPONDENCE

CABOT TITANIA, INC.

P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO [REDACTED]

August 6, 1968

SUBJECT: Water Pollution Control
Permit Application

To: E. J. Holland

From: H. A. Kiskadden

Throughout the past year we have complied with the required sampling and analytical procedures for discharges into waters of the State. In addition to this we have monitored our effluents for upset conditions. When these conditions have occurred corrective action was taken as soon as possible. At times we have had to control our effluents, at extra expense, so that they would be compatible with other plants' discharges downstream of ours.

In the coming year we will continue to furnish data in compliance with the requirements as well as continuing our program of sampling routinely for the intermittent upset.

H. A. Kiskadden

HAK/pk

cc: GTC

SCM

000722

INTEROFFICE CORRESPONDENCE

CABOT TITANIA, INC.

P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

SUBJECT: **Waste Disposal - Water Pollution Control Permit (No. 1463)**

August 8, 1968

To: E. J. Holland

Our programme of effluent monitoring and waste pond dredging should ensure a reasonable effluent from the $TiCl_4$ unit. As Harry Kiskadden points out, we have from time to time had to make extra efforts (at greatly increased cost) to ensure that our effluent was compatible with that of other plants. We will, of course, continue to do this.

With the advent of the recovery system on January 1st, 1969, excellent performance is to be expected from the clarifier system with only routine maintenance.

M. G. Fowler

MGF/pk

SCM

000723

July 17, 1968

Cabot Titania Incorporated
Titanium Dioxide
Summary of Effluent - Monthly Reports

	<u>12/66 - 12/67</u>	<u>1/68 - 6/68</u>	
pH			
Average	8.1	8.9	6-9
Range	5.6 - 9.8	7.4 - 10.1	
Data Points	56	26	
Alkalinity (ppm CaCO ₃)			
Average	817	1608	
Range	20 - 5360	350 - 2840	
Data Points	54	26	
Chlorides (ppm)			
Average	592	657	750
Range	96 - 1109	434 - 1011	
Data Points	56	26	
Suspended Solids (ppm)			
Average	100	168	
Range	0.1 - 677	15 - 749	
Data Points	56	26	
Settleable Solids			
Average	1.1	3.2	0
Range	0.1 - 6	.2 - 27	
Data Points	56	26	
Appearance	Slightly Turbid	Slightly Turbid	CLEAR
Odor	None	None	
Flow (MM Gallons)		~ 1.3 *	

*Calculated from Weir Readings at Outfall

000724

SCM

WATER POLLUTION CONTROL BOARD
OHIO DEPARTMENT OF HEALTH
COLUMBUS, OHIO

RESOLUTION REGARDING AMENDED CRITERIA OF STREAM-WATER QUALITY
FOR VARIOUS USES ADOPTED BY THE BOARD ON OCTOBER 10, 1967

WHEREAS, Section 6111.03, of the Ohio Revised Code, provides, in part, as follows:

"The water pollution control board shall have power:

(A) To develop programs for the prevention, control and abatement of new or existing pollution of the waters of the state; . . . " and

WHEREAS, Primary indicators of stream-water quality are needed as guides for appraising the suitability of surface waters in Ohio for various uses; and

WHEREAS, The stream-water quality criteria for various uses and minimum conditions applicable to all waters adopted by the Board on June 14, 1966, have been amended by the Ohio River Valley Water Sanitation Commission;

THEREFORE BE IT RESOLVED, That the following amended stream-water quality criteria for various uses, and minimum conditions applicable to all waters, are hereby adopted in accordance with amendments of the Ohio River Valley Water Sanitation Commission.

MINIMUM CONDITIONS APPLICABLE TO
ALL WATERS AT ALL PLACES AND AT ALL TIMES

1. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices that will settle to form putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges, or agricultural practices in amounts sufficient to be unsightly or deleterious.
3. Free from materials attributable to municipal, industrial or other discharges, or agricultural practices producing color, odor or other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices in concentrations or combinations which are toxic or harmful to human, animal, plant or aquatic life.

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STREAM-QUALITY CRITERIA

FOR PUBLIC WATER SUPPLY

The following criteria are for evaluation of stream quality at the point at which water is withdrawn for treatment and distribution as a potable supply:

1. Bacteria: Coliform group not to exceed 5,000 per 100 ml as a monthly average value (either MPN or MF count); nor exceed this number in more than 20 percent of the samples examined during any month; nor exceed 20,000 per 100 ml in more than five percent of such samples.
2. Threshold-odor Number: Not to exceed 24 (at 60 deg. C.) as a daily average.
3. Dissolved solids: Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time.
4. Radioactivity: Gross beta activity not to exceed 1,000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.
5. Chemical constituents: Not to exceed the following specified concentrations at any time:

<u>Constituent</u>	<u>Concentration (mg/l)</u>
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium (hexavalent)	0.05
Cyanide	0.025
Fluoride	1.0
Lead	0.05
Selenium	0.01
Silver	0.05

FOR INDUSTRIAL WATER SUPPLY

The following criteria are applicable to stream water at the point at which the water is withdrawn for use (either with or without treatment) for industrial cooling and processing:

1. Dissolved oxygen: Not less than 2.0 mg/l as a daily-average value, nor less than 1.0 mg/l at any time.
2. pH: Not less than 5.0 nor greater than 9.0 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Dissolved solids: Not to exceed 750 mg/l as a monthly average value, nor exceed 1,000 mg/l at any time.

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FOR AQUATIC LIFE A

The following criteria are for evaluation of conditions for the maintenance of a well-balanced, warm-water fish population. They are applicable at any point in the stream except for areas immediately adjacent to outfalls. In such areas cognizance will be given to opportunities for the admixture of waste effluents with stream water:

1. Dissolved oxygen: Not less than 5.0 mg/l during at least 16 hours of any 24-hour period, nor less than 3.0 mg/l at any time.
2. pH: No values below 5.0 nor above 9.0, and daily average (or median) values preferably between 6.5 and 8.5.
3. Temperature: Not to exceed 93 deg. F. at any time during the months of May through November, and not to exceed 73 deg. F. at any time during the months of December through April.
4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

FOR AQUATIC LIFE B

The following criteria are for evaluation of conditions for the maintenance of desirable biological growths and, in limited stretches of a stream, for permitting the passage of fish through the water, except for areas immediately adjacent to outfalls. In such areas cognizance will be given to opportunities for admixture of effluents with stream water:

1. Dissolved oxygen: Not less than 2.0 mg/l as a daily-average value, nor less than 1.0 mg/l at any time.
2. pH: Not less than 5.0 nor greater than 9.0 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

FOR RECREATION

The following criterion is for evaluation of conditions at any point in waters designated to be used for recreational purposes, including such water-contact activities as swimming and water skiing:

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Bacteria: Coliform group not to exceed 1,000 per 100 ml as a monthly average value (either MPN or MF count); nor exceed this number in more than 20 percent of the samples examined during any month; nor exceed 2,400 per 100 ml (MPN or MF count) on any day.

FOR AGRICULTURAL USE AND STOCK WATERING

The following criteria are applicable for the evaluation of stream quality at places where water is withdrawn for agricultural use or stock-watering purposes:

1. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices that will settle to form putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges, or agricultural practices in amounts sufficient to be unsightly or deleterious.
3. Free from materials attributable to municipal, industrial or other discharges, or agricultural practices producing color, odor or other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other discharges or agricultural practices in concentrations or combinations which are toxic or harmful to human, animal, plant or aquatic life.

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**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA

AREA CODE 216 897-8501

April 10, 1969

Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Gentlemen:

In response to the requirements stated in condition No. 6 in your letter of November 13, 1968, we have made the following progress in reducing water pollution nuisances from the discharge of our Titanium Dioxide unit into Fields Brook:

Although the main process waste streams have been directed to settling ponds for the removal of the suspended solids since 1966, on numerous occasions the plant effluent entering Fields Brook has contained suspended solids which entered the plant storm sewers from equipment washing, natural rainfall and occasional spills. These actions caused peak concentrations of suspended solids of 600 ppm from time to time at the outfall.

In order to avoid discharging water containing suspended solids into the Brook, the storm sewers from all areas of the plant where a suspended solids problem might be created are being directed through the system of settling ponds. New ponds will be required to accept the increased volume of water. The ponds will be made large enough to handle the occasional high loads caused by rainfall.

These changes are now being engineered and will be completed by September 1, 1969. After that time the effluent from the Titanium Dioxide unit is expected to be of sufficiently good quality to meet all the requirements of the industrial water supply.

Yours very truly,

E. J. Holland
Plant Manager

EJH/pk

Permit No. 1824

bcc: FEDaley, CBeck, TWarren
IH, FRM, MGF, JR, RC

000732

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INTEROFFICE CORRESPONDENCE

CABOT TITANIA, INC.

P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

July 28, 1969

SUBJECT: Proposed Modifications to Storm Sewers and Settling Ponds

To: F. R. Mohrmann

From: H. P. Cassidy

The oxides plant effluent occasionally contains suspended solids which enter the plant storm sewers from equipment washings, rainfalls and occasional spills. These incidents cause high concentrations of suspended solids resulting in an effluent that is very turbid. Turbidity is very evident above 40 ppm. Peak concentrations of 600 ppm suspended solids have been measured at times at the plant outfall.

EJH in a letter to the State of Ohio, Water Pollution Control Board, 4/10/69, stated that we will divert the storm sewers from all areas of the plant where suspended solids might be created, to our settling pond system where process waste streams are collected in order to avoid discharging water containing suspended solids into Fields Brook. He also stated that new ponds will be required to accept the increased volume of water.

In our proposed modifications we plan to make the necessary changes in two steps:

Step 1: The storm sewer serving the aftertreatment, chlorine recovery and oxidation areas will be diverted to the settling ponds for removal of suspended solids. This storm sewer is the principal source of contamination from washings, spills, etc.

Step 2: We have included in our proposal the cost for three additional ponds. However we plan to postpone this part of the project until fiscal 1970. Preliminary investigations of improved flocculant aids indicate that three additional ponds may not be necessary. Testing of flocculants is now in progress to determine what settling pond volume will be required.

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After the proposed modifications have been completed we expect to maintain the plant effluent at less than 10 ppm suspended solids and meet the state's "minimum conditions applicable to all waters at all places and all times."

HPC
H. P. Cassidy

HPC/pk

cc: FEDaley
IHHess
REClark
KLYang

SCM

000734

The logo for Cabot Corporation, featuring the word "CABOT" in a stylized font inside a circular emblem.**CABOT TITANIA CORPORATION**

P.O. BOX 160, ASHTABULA, OHIO 44004

ASHTABULA, OHIO 44004
P.O. BOX 160

May 8, 1969

**Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216**

Dear Mr. Hall:

Our application for renewal of Permit No. 1824 for the discharge of industrial wastes and sanitary sewage from the Titanium Dioxide unit is attached to this letter. We have complied with all of the conditions of the Water Pollution Control Act and with the conditions listed in Dr. Arnold's letter of November 13, 1968 except that the report which was due prior to March 1, 1969 was delayed by our engineering investigations until April 10, 1969.

Yours very truly,

**Edward J. Holland
Plant Manager**

EJH/ph

000735

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(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location Middle Road, Ashtabula, Ohio
3. Type of Establishment (If not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1824).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official: _____

Title Plant Manger, Ashtabula Facilities

Post Office Address Cabot Titania Incorporated

P. O. Box 160, Ashtabula, Ohio 44004

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant Edward J. Holland

Sworn to and subscribed in my presence this 6th day of May, 1969,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title Patricia E. Kibbee
Notary Public, Ashtabula County, Ohio
My Commission Expires July 12, 1973

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000736

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1968

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires July 1, 1969. Renewal of this permit is contingent upon compliance with the following conditions:

1. Continue the in-plant improvements to further reduce critical constituents in the plant effluent.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

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Cabot Titania Corporation
Titanium Dioxide Unit

-2-

November 13, 1968

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Submit to the Division of Engineering by March 1, 1969, a report regarding the quality of the plant effluent, with particular emphasis on meeting the requirements for industrial Water Quality Criteria as established by the Water Pollution Control Board's Resolution adopted October 10, 1967 (copy enclosed).

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.6

Certified mail

cc: Health Commissioner
cc: District Office

000738

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**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

ASHTABULA

April 10, 1969

**Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216**

Gentlemen:

In response to the requirements stated in condition No. 6 in your letter of November 13, 1968, we have made the following progress in reducing water pollution nuisances from the discharge of our Titanium Dioxide unit into Fields Brook:

Although the main process waste streams have been directed to settling ponds for the removal of the suspended solids since 1966, on numerous occasions the plant effluent entering Fields Brook has contained suspended solids which entered the plant storm sewers from equipment washing, natural rainfall and occasional spills. These actions caused peak concentrations of suspended solids of 600 ppm from time to time at the outfall.

In order to avoid discharging water containing suspended solids into the Brook, the storm sewers from all areas of the plant where a suspended solids problem might be created are being directed through the system of settling ponds. New ponds will be required to accept the increased volume of water. The ponds will be made large enough to handle the occasional high loads caused by rainfall.

These changes are now being engineered and will be completed by September 1, 1969. After that time the effluent from the Titanium Dioxide unit is expected to be of sufficiently good quality to meet all the requirements of the industrial water supply.

Yours very truly,

**E. J. Holland
Plant Manager**

RJH/pk**Permit No. 1824**

**bcc: FEDaley, CBeck, TWarren
IHH, FRM, MGF, JR, RC**

SCM**SCM****000739**

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. C. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
ROBERT B. HOLT

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

October 15, 1969

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act of Ohio.

You will note that this permit expires July 1, 1970. Renewal of this permit is contingent upon compliance with the following conditions:

1. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
2. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
4. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.

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Cabot Titania, Inc.
Titanium Dioxide Unit

-2-

October 15, 1969

5. Submit to and secure approval by the Ohio Department of Health of detail plans and specifications for additional settling facilities to improve solids removal.
6. Complete construction of the additional facilities in accordance with approved detail plans.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.7

Certified mail

cc: Health Commissioner
cc: District Office

000741

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STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1824.7

Date Issued - October 15, 1969

Expiration Date - July 1, 1970

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania, Inc.

Titanium Dioxide Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

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WATER POLLUTION CONTROL BOARD
OHIO DEPARTMENT OF HEALTH
COLUMBUS, OHIO

RESOLUTION ESTABLISHING AMENDED CRITERIA OF STREAM-WATER QUALITY
FOR VARIOUS USES ADOPTED BY THE BOARD ON APRIL 14, 1970

WHEREAS, Section 6111.03, of the Ohio Revised Code, provides, in part,
as follows:

"The water pollution control board shall have power:

(A) To develop programs for the prevention, control and
abatement of new or existing pollution of the waters of
the state;" and

WHEREAS, Primary indicators of stream-water quality are needed as
guides for appraising the suitability of surface waters in
Ohio for various uses; and

WHEREAS, The stream-water quality criteria for various uses and
minimum conditions applicable to all waters adopted by the
Board of June 14, 1966, have been amended by the Ohio River
Valley Water Sanitation Commission; and

WHEREAS, The criteria adopted by the Board on October 10, 1967, have
been further amended by the Ohio River Valley Water Sanitation
Commission;

THEREFORE BE IT RESOLVED, That the following amended stream-water quality
criteria for various uses, and minimum conditions applicable to
all waters, and policies for protection of high quality waters
and for water quality design flow, are hereby adopted in
accordance with amendments of the Ohio River Valley Water
Sanitation Commission, and the recommendations of the Federal
Water Pollution Control Administration.

AND BE IT FURTHER RESOLVED, That the amended stream-water quality criteria
for various uses, for minimum conditions, for protection of high
quality waters, and, for water quality design flow, be made
applicable to the following waters of the state:

1. Maumee, Tiffin, St. Joseph, and St. Marys River Basins;
2. Lake Erie & Interstate Waters thereof;
3. Great Miami, Whitewater, and Wabash River Basins;
4. Ashtabula River, Conneaut and Turkey Creeks;
5. Ohio River of Ohio-West Virginia and Ohio-Kentucky;
6. North Central Ohio Tributaries of Lake Erie;
7. Scioto River Basin;
8. Little Miami River Basin;
9. Rocky, Cuyahoga, Chagrin, and Grand River Basins;
10. Muskingum River Basin;
11. Hocking River Basin.

PROPOSED 4/14/
STANDARDS 70

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MINIMUM CONDITIONS APPLICABLE TO
ALL WATERS AT ALL PLACES AND AT ALL TIMES

1. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices that will settle to form putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges, or agricultural practices in amounts sufficient to be unsightly or deleterious.
3. Free from materials attributable to municipal, industrial or other discharges, or agricultural practices producing color, odor or other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices in concentrations or combinations which are toxic or harmful to human, animal, plant or aquatic life.

PROTECTION OF HIGH QUALITY WATERS

Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at their existing high quality, pursuant to the Ohio water pollution control statutes, so as not to interfere with or become injurious to any assigned uses made of, or presently possible, in such waters. This will require that any industrial, public or private project or development which would constitute a new source of pollution or an increased source of pollution to high quality waters will be required, as part of the initial project design, to provide the most effective waste treatment available under existing technology. The Ohio Water Pollution Control Board will cooperate with other agencies of the state, agencies of other states, interstate agencies and the Federal Government in the enforcement of this policy.

WATER QUALITY DESIGN FLOW

Where applicable for the determination of treatment requirements the water quality design flow shall be the minimum seven consecutive day average that is exceeded in 90 percent of the years.

STREAM-QUALITY CRITERIA

FOR PUBLIC WATER SUPPLY

The following criteria are for evaluation of stream quality at the point at which water is withdrawn for treatment and distribution as a potable supply:

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1. Bacteria: Coliform group not to exceed 5,000 per 100 ml as a monthly average value (either MPN or MF count); nor exceed this number in more than 20 percent of the samples examined during any month; nor exceed 20,000 per 100 ml in more than five percent of such samples.
2. Threshold-odor Number: Not to exceed 24 (at 60 deg. C.) as a daily average.
3. Dissolved solids: Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time.
4. Radioactivity: Gross beta activity not to exceed 1,000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.
5. Chemical constituents: Not to exceed the following specified concentrations at any time.

<u>Constituent</u>	<u>Concentration (mg/l)</u>
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium (hexavalent)	0.05
Cyanide	0.025
Fluoride	1.0
Lead	0.05
Selenium	0.01
Silver	0.05

FOR INDUSTRIAL WATER SUPPLY

The following criteria are applicable to stream water at the point at which the water is withdrawn for use (either with or without treatment) for industrial cooling and processing:

1. Dissolved oxygen: Not less than 2.0 mg/l as a daily-average value, nor less than 1.0 mg/l at any time. *T.O₂ - 10.6*
T.Cl₂ - 6.3
2. pH: Not less than 5.0 nor greater than 9.0 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Dissolved solids: Not to exceed 750 mg/l as a monthly average value, nor exceed 1,000 mg/l at any time.

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FOR AQUATIC LIFE A

The following criteria are for evaluation of conditions for the maintenance of a well-balanced, warm-water fish population. They are applicable at any point in the stream except for areas necessary for the admixture of waste effluents with stream water:

1. Dissolved oxygen: Not less than an average of 5.0 mg/l per calendar day and not less than 4.0 mg/l at any time.
2. pH:
 - A. No values below 6.0 nor above 8.5.
 - B. Daily fluctuations which exceed the range of pH 6.0 to pH 8.5 and are correlated with photosynthetic activity may be tolerated.
3. Temperature:
 - A. No abnormal temperature changes that may affect aquatic life unless caused by natural conditions.
 - B. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
 - C. Maximum temperature rise at any time or place above natural temperatures shall not exceed 5 deg. F. In addition, the water temperature shall not exceed the maximum limits indicated in the following table.

WATERS	Maximum Temperature in Deg. F. During Month											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
All waters except												
Ohio River	50	50	60	70	80	90	90	90	90	78	70	57
Main Stem-Ohio River	50	50	60	70	80	87	89	89	87	78	70	57

4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

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FOR AQUATIC LIFE B

The following criteria are for evaluation of conditions for the maintenance of desirable biological growths and, in limited stretches of a stream, for permitting the passage of fish through the water, except for areas necessary for admixture of effluents with stream water:

1. Dissolved oxygen: Not less than 3.0 mg/l as a daily-average value, nor less than 2.0 mg/l at any time.
2. pH: Not less than 6.0 nor greater than 8.5 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

FOR RECREATION

The following criterion is for evaluation of conditions at any point in waters designated to be used for recreational purposes, including such water-contact activities as swimming and water skiing:

Bacteria: The fecal coliform content (either MPN or MF count) not to exceed 200 per 100 ML as a monthly geometric mean based on not less than five samples per month; nor exceed 400 per 100 ML in more than ten percent of all samples taken during a month.

FOR AGRICULTURAL USE AND STOCK WATERING

The following criteria are applicable for the evaluation of stream quality at places where water is withdrawn for agricultural use or stock-watering purposes:

1. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices that will settle to form putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges, or agricultural practices in amounts sufficient to be unsightly or deleterious.
3. Free from materials attributable to municipal, industrial or other discharges, or agricultural practices producing color, odor or other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other discharges or agricultural practices in concentrations or combinations which are toxic or harmful to human, animal, plant or aquatic life.

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location Middle Road, Ashtabula Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1824.7).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____
Title Plant Manager
Post Office Address P. O. Box 160
Ashtabula, Ohio

VERIFICATION

Fred R. Mohrmann, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this 11th day of May, 1970,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title Notary Public, Ashtabula County, Ohio
Commission Expires July 12, 1973

SCM

GENERAL INSTRUCTIONS

1. *Name of applicant* means municipality, political subdivision, public or private corporation, individual, partnership or other entity.
2. *Location* means municipality or township and county in Ohio.
3. *Type of Establishment* - The classification of the industrial firm, institution, or service entity from which the wastes in question result.
4. *Type of Discharge* means sewage, industrial wastes or other wastes (see Section 6111.01 (B), (C) and (D) R.C.). Mixtures should be so indicated.
5. Identity of the body of water to which discharge is made should be named. The next larger tributary, generally known, also should be named.
6. Treatment insofar as this paragraph is concerned constitutes alteration of polluting constituents of wastes discharged by the reduction of their effect on the receiving waters of the state. If the answer is Yes to the question, supplementary information should be submitted to clearly establish the effectiveness of such treatment. If the answer is No supplementary information should describe any program of proposed improvements for pollution abatement (see Item 7).
7. Submission of relevant information should be attached and titled *Exhibit A* if no other descriptive title is given. Such supplemental data should set forth the number and location of outlets if more than one is involved; details of present and proposed volume and strength (*variability*) of discharge to be disposed; normalcy with respect to present production and resultant pollution loads; and such other information as may be pertinent to the control, prevention and abatement of pollution.

JAMES A. RHODES, Governor

State of Ohio

EMMETT W. ARNOLD, M.D.
Director of Health

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

PUBLIC HEALTH COUNCIL

Richard V. Brunner, D.D.S.
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J. Howard Holmes, M.D.
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Lloyd E. Larrick, M.D.
J. Bruce Wenger, D.V.M.

Re: Cabot Titania, Inc., Titanium Tetrachloride Unit
Ashtabula
Industrial Wastes

July 13, 1970

Mr. Fred R. Mohrmann, Plant Manager
Cabot Titania, Inc.
Titanium Tetrachloride Unit
P.O. Box 160
Ashtabula, Ohio 44004

Dear Sir:

At the meeting held April 1, 1970, in Ashtabula, with representatives of the various companies discharging industrial wastewater into Field's Brook, Mr. J. E. Richards of the Ohio Department of Health, stressed the following points:

1. Although Field's Brook is not classified for specific uses, it is a water of the state and as such must conform to the water quality criteria that are applicable to all Waters of the State (the four freedoms).
2. The present effluents to Field's Brook are incompatible, sometimes grossly so, with maintaining the stream's required quality; with special emphasis on color, odor, suspended solids, pH, and possible toxicity.
3. The problem with pollution with Field's Brook is an old one, and none of the provisions the individual companies have taken in the past to solve it are adequate.
4. The state expects the companies to take immediate steps toward meeting the approved water quality standards.
5. A study of the feasibility of combined terminal treatment should be implemented at once, and completed as soon as possible.
6. Should combined terminal treatment prove infeasible plans for individual treatment processes that would produce acceptable effluents should be developed and submitted to the state for approval with all reasonable urgency.

Recent information obtained from Mr. M. G. Glenn of General Tire and Rubber indicated that in excess of three months will have elapsed since the April

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July 13, 1970

meeting and the time the contract is let for the feasibility studies on combined terminal treatment. It is also understood that the prospective consultants have estimated that the study may require as long as six months to complete. In the opinion of department personnel, this seems unduly long.

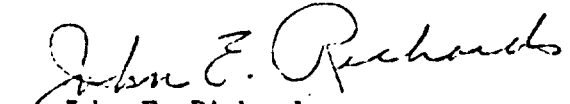
Because the matter of cleaning up Field's Brook is extremely urgent, it is requested that the companies submit by August 1, 1970, firm written commitments stating that they are participating in the feasibility study for combined terminal treatment.

It is urged that the companies do everything in their power to expedite these feasibility studies. It is the feeling of Ohio Department of Health personnel that the consultant should complete the studies by October 31. This does not seem to be unreasonable considering that much data on the quantity and composition of effluents and on Field's Brook itself is already available. It is also urged that the companies conduct, as parallel programs, feasibility studies on the individual treatment approach, so that when the results of the combined treatment studies are completed, comparisons and final judgements can be made without unnecessary delay. It is recognized that some companies are presently making such studies.

Recommendations by the Division of Engineering to the Water Pollution Control Board for your permit renewal are being withheld pending receipt of written confirmation from you that your company is participating in the study of combined terminal treatment.

If your company has any questions or comments concerning this letter, the Division of Engineering will be happy to answer or discuss them with you.

Yours very truly,



John E. Richards

Engineer-in-Charge

Sewage and Industrial Wastes Unit

JER:akf

cc Water Pollution Control Board

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CABOT TITANIA, INC.

P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA

AREA CODE 216 997-5501

July 28, 1970

Mr. John E. Richards
Engineer in Charge
Sewage and Industrial Wastes Unit
Department of Health
P. O. Box 118
Columbus, Ohio 43216

Dear Sir:

I have been authorized to submit to you Cabot Titania Incorporated's confirmation that we will participate in the feasibility study for combined terminal treatment of effluents going into Fields Brook to be done by Catalytic Construction Company.

Cabot Titania Inc. has had an active program to improve the effluents from the Titanium Dioxide Unit and the Titanium Tetrachloride Unit in order to meet the "four freedoms". This has been done in the past and will continue while the feasibility study is being carried on so that when the feasibility study is complete, Cabot Titania Inc. will be able to weigh the advantages and disadvantages of terminal and individual treatment. Therefore, there is no further commitment beyond participating in the feasibility study.

As indicated in your letter, with our commitment in writing to participate in the study of combined terminal treatment, Cabot Titania Inc. expects the permit renewal will be effective retroactive to July 1, 1970 and will be for the period through June 30, 1971.

Yours very truly,

Fred R. Mohrmann
Plant Manager

FRM/pk

Permit: 1463 Titanium Tetrachloride Unit
1824 Titanium Dioxide Unit

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(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name _____
2. Location _____
3. Type of Establishment (if not a political subdivision) _____
4. Type of Discharge _____
5. Body of Water Receiving Discharge _____
(a) Next larger receiving tributary _____
6. Is Discharge Treated? --- Yes _____ No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. _____).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title _____

Post Office Address _____

VERIFICATION

_____, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this _____ day of _____, 19____,
at _____, County of _____ And State of _____.

Signature of Officer _____

Official Title _____

SCM

GENERAL INSTRUCTIONS

1. **Name of applicant** means municipality, political subdivision, public or private corporation, individual, partnership or other entity.
2. **Location** means municipality or township and county in Ohio.
3. **Type of Establishment** – The classification of the industrial firm, institution, or service entity from which the wastes in question result.
4. **Type of Discharge** means sewage, industrial wastes or other wastes (see Section 6111.01 (B), (C) and (D) R.C.). Mixtures should be so indicated.
5. Identity of the body of water to which discharge is made should be named. The next larger tributary, generally known, also should be named.
6. Treatment insofar as this paragraph is concerned constitutes alteration of polluting constituents of wastes discharged by the reduction of their effect on the receiving waters of the state. If the answer is Yes to the question, supplementary information should be submitted to clearly establish the effectiveness of such treatment. If the answer is No supplementary information should describe any program of proposed improvements for pollution abatement (see Item 7).
7. Submission of relevant information should be attached and titled *Exhibit A* if no other descriptive title is given. Such supplemental data should set forth the number and location of outlets if more than one is involved; details of present and proposed volume and strength (*variability*) of discharge to be disposed; normalcy with respect to present production and resultant pollution loads; and such other information as may be pertinent to the control, prevention and abatement of pollution.



CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

March 30, 1971

Mr. George H. Eagle
Chief Engineer
Ohio Department of Health
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216.

Dear Mr. Eagle:

In reference to renewal permits for our Titanium Tetrachloride Unit (No. 1463) and our Titanium Dioxide Unit (No. 1824) pertaining to condition Number 1, for the permit renewal, Cabot Titania has made the decision not to proceed with the combined treatment approach but has elected to approach it on an individual basis.

Very truly yours,

Fred R. Mohrmann
Plant Manager

FRM/pk

cc: Mr. G. A. Hall
Engineer Secretary

000764

SCM

JOHN J. GILLIGAN, Governor

State of Ohio

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

NOTICE

March 22, 1971

Enclosed is a copy of the "Resolution Adopted By The Ohio Water Pollution Control Board, February 9, 1971, Regarding Discharge Of Toxins To Waters Of The State".

You are directed to advise this office by June 1, 1971, as to your compliance with this resolution and to the requirements set forth in the "Safeguards For Toxins" which is a part of the resolution".

George H. Eagle
Chief Engineer

Enclosure

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RESOLUTION ADOPTED BY THE OHIO WATER POLLUTION CONTROL BOARD
FEBRUARY 9, 1971, REGARDING DISCHARGE OF TOXINS
TO THE WATERS OF THE STATE

WHEREAS, Section 6111.01 of the Ohio Revised Code, states, in part as follows:

"(A) 'Pollution' means the placing of any noxious or deleterious substances in any waters of the state or affecting the properties of any waters of the state in a manner which renders such waters harmful or inimical to the public health, or to animal or aquatic life, or to the use of such waters for domestic water supply, or industrial or agricultural purposes, or for recreation."

WHEREAS, An increasing number of materials containing toxic constituents (such materials or constituents are referred to herein as "toxins") are being used in or result from various industrial, commercial and agricultural operations; and

WHEREAS, An increasing number of discharges of said toxins to the waters of the state in violation of section 6111.01 et seq. of the Ohio Revised Code and the Stream-Water Quality Standards adopted by the Board, has come to the attention of various state agencies;

THEREFORE BE IT RESOLVED, That persons who use or whose operations produce toxins shall forthwith eliminate the conceivable possibilities of discharges of said toxins into the waters of the state, including those of an accidental nature;

AND BE IT FURTHER RESOLVED, That the staff of the Ohio Department of Health is hereby directed to distribute to all persons who may use or whose operations may produce toxins this resolution and the "Safeguards for Toxins," a copy of which is attached and made a part of this resolution;

AND BE IT FURTHER RESOLVED, That request will be made to the Attorney General for the prosecution under sections 6111.04, 6111.07 and 6111.99 of the Ohio Revised Code of any person who pollutes the waters of the state who has not complied with this resolution and the requirements set forth in the "Safeguards for Toxins," and said "Safeguards for Toxins" shall be made a condition of each permit issued by the Board hereafter; compliance with this resolution and the "Safeguards for Toxins" is not a defense to any action brought pursuant to law or equity.

SCM

SAFEGUARDS FOR TOXINS

1. Survey all chemicals handled or used in industrial, commercial, agricultural and related operations as to their toxicity and furnish the Ohio Department of Health, Division of Engineering, with a list of all chemicals and materials which are toxic. The list shall include the trade name, the generic name of the toxicant and the supplier of the material.
2. Where possible, substitute non-toxic materials.
3. Maintain consistent and permanent labels on all portions of toxins kept on the premises.
4. Institute an educational program to insure that all personnel handling toxins are cognizant of their hazards.
5. Where toxins are used in or result from the processes, install fail-safe provisions to prevent the release of any toxins which may cause pollution.
6. Work with the manufacturers of the toxins to develop means of detection and alarm (notification) of any release of said toxins.
7. Construct emergency holding facilities to prevent discharge of wastewater which may be accidentally contaminated with toxins.

SCM

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JOHN J. GILLIGAN, Governor

State of Ohio

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

April 12, 1971

Mr. F. R. Mohrmann, Plant Manager
Cabot Titania Corporation
P.O. Box 160
Ashtabula, Ohio 44004

Dear Sir:

As you know, action by the Division of Engineering on your company's application for permit renewal has been deferred for several months, pending the completion of the Catalytic, Inc. studies on the joint terminal treatment approach. Since this approach has now been decided against, the alternative, an individual treatment process which will produce an acceptable effluent, must be developed and placed in operation as soon as possible.

Your company's application for permit renewal will be considered by the Water Pollution Control Board, hopefully, in the May, 1971 meetings. Permit conditions that the Division of Engineering will recommend to the Board, include the following.

1. Submission by June 1, 1971, of detail plans and/or procedures that will enable your plant to produce, consistently, waste effluent compatible with Ohio Water Quality Standards.
2. Submission, by July 1, 1971, of proposed schedule for completion and implementation of the required facilities and/or procedures.
3. Place under construction prior to September 1, 1971 the facilities called for in detail plans.
4. An expiration date of October 1, 1971, by which time your company's schedules can be reviewed, thoroughly discussed, and modified, where necessary.

Recommendations by the Division of Engineering to the Board for the subsequent permit (after October 1, 1971) will cover a firm and realistic schedule for completing the construction of facilities and placing the waste treatment process in operation.

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Page two
April 12, 1971

The Division of Engineering wishes to emphasize that the effluent from your plant's new facility must be completely and consistently compatible with the pertinent criteria. These pertinent criteria are contained in "Resolution Establishing Amended Criteria of Stream Water Quality" adopted by the Board on April 14, 1970.

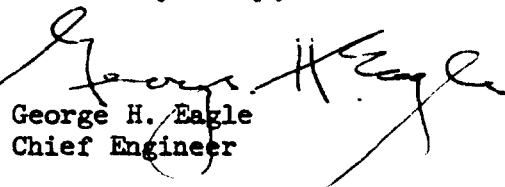
1. Minimum Conditions Applicable To All Waters At All Places And At All Times (page 2).
2. In addition the pH, dissolved oxygen, dissolved solids and temperature of Fields Brook must be maintained at levels specified for industrial waters (page 4).

Satisfactory compliance with these criteria will demand some form of continuous monitoring of the final effluent. To the extent possible, the Division of Engineering will exercise reasonableness in recommending schedules to the Board, in recognition of the fact that what is now wanted is a fully adequate, consistent and reliable waste treatment process, with ample safety factors designed into it.

Due to critical and long standing problems in Fields Brook no undue delay in construction of corrective measures can be tolerated. It is urged, for example, that if long-term-delivery items of equipment will be required in the proposed process, these should be placed on order as soon as possible. Delays in schedules based on purely economic factors would also be difficult to defend.

In summary, your company is being directed to make the cleaning up of Fields Brook a high-priority project; and to act immediately and diligently to accomplish this.

Yours very truly,


George H. Eagle
Chief Engineer

cc: Water Pollution Control Board
cc: Northeast District Office

SCM

000769

JOHN J. GILLIGAN, Governor

State of Ohio

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

Re: Ashtabula
Cabot Titania, Inc.
Waste Treatment Facilities
Plans Received June 9, 1971

August 13, 1971

To the Cabot Titania, Inc.
P.O. Box 160
Ashtabula, Ohio 44004

Gentlemen:

You are hereby notified that the Ohio Department of Health in accordance with the provisions of Section 3701.19, Revised Code of Ohio, has this day approved plans of the referenced project subject to the following conditions:

That the proposed facilities shall be constructed under the supervision of an engineer experienced in such work;

That the Division of Engineering shall be notified, specifically and in writing, as to (a) the construction starting date (b) the construction completion date and (c) the date the facilities were placed into operation;

That additional treatment facilities shall be installed as required to meet established stream water quality standards and to eliminate conditions that may adversely affect the public health;

That this approval shall become void September 1, 1972, unless the facilities shall be constructed as proposed by that time;

That a report, which provides a technical appraisal of the results obtained during normal operating conditions of the new facilities, be submitted to the Division of Engineering no later than three months after the new facilities are placed into operation.

This approval is limited to the aspects of the plans related to processing or disposal of wastewater and does not apply to structural and safety requirements.

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Page 2

August 13, 1971

Cabot Titania, Inc., P.O. Box 160, Ashtabula, Ohio 44004

Please acknowledge receipt of this letter and state your acceptance of the conditions imposed in this letter and in the Department of Health report on the proposed plans.

Yours truly,

T. A. Gardner, M.D.
Acting Director of Health

Copy to Ashtabula City H'lth Dept.
" " Water Pollution Control Board
" " Northeast District Office

by *George H. Eagle*
George H. Eagle, P.E.
Chief Engineer

SCM

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7/2

DAT
IHH
WFG
FED
CB
RL

JOHN J. GILLIGAN, Governor

Can't leave if it's not ✓
State of Ohio



450 East Town Street
P.O. Box 118
Columbus, Ohio 43216

Department of Health

June 30, 1971

Re: Cabot Titania Corporation
Ashtabula

Cabot Titania Corporation
Post Office Box 160
Ashtabula, Ohio

Attention: Mr. F. R. Mohrmann, Plant Manager

Dear Sir:

This is to indicate concurrence of the Division of Engineering with the plans submitted by Mr. Irwin Hess on June 10, 1971 for waste treatment facilities at the Cabot Ti O₂ and Ti Cl₄ plants in Ashtabula. An informal approval is given at this time so that you may proceed as rapidly as possible with construction of the facilities described in your submission.

A formal letter of approval will be issued in July.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James F. Shea".

James F. Shea
Engineer
Industrial Waste Section

JFS:mj

SCM

000772

→ LTH
FRM
J. GILLIGAN, Governor

State of Ohio

50 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

December 8, 1971

Mr. Fred Mohrmann, Plant Manager
Cabot Titania, Inc.
Post Office Box 160
Ashtabula, Ohio 44004

Dear Mr. Mohrmann:

This is to express concurrence of the Division of Engineering with the plans for a sludge holding pond. These plans, submitted with your letter of November 17, 1971 and received by us November 18, are described in Cabot Titania Corporation drawing 10-D-1006-11.

A letter of formal approval will be sent to you by the second week in December.

Sincerely,

James F. Shea
James F. Shea, Engineer
Industrial Waste Section
Division of Engineering

JFS:mj

cc: Adam L. Wesner

SCM

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certified
State of Ohio

Address Reply to:

Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



*FEW
WFG
IHH
RL*

Department of Health
Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

April 14, 1972

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Gentlemen:

As a result of Board action April 11, 1972, and pursuant to Ohio Revised Code, Section 6111.03 (H) and (J), the Ohio Water Pollution Control Board proposes to adopt, at its next regular meeting, the following Findings and Orders in response to the application of Cabot Titania, Inc., Titanium Dioxide Unit, located on Field Brook:

PROPOSED FINDINGS

1. That the application of Cabot Titania, Inc., Titanium Dioxide Unit, for a permit under Chapter 6111 of the Ohio Revised Code was properly filed with the Water Pollution Control Board.
2. That the applicant has failed to remove the polluting properties from its industrial waste.
3. That the applicant's failure to remove the polluting properties from its industrial waste has and is resulting in violation of the applicable water quality standards.
4. That it is technically feasible and economically reasonable to remove the polluting properties from the applicant's industrial waste.
5. That the failure of the applicant to remove the polluting properties from its industrial waste results in a denial of legitimate beneficial uses of waters of the State of Ohio.

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April 14, 1972

PROPOSED ORDERS

1. That Cabot Titania's application for a permit is hereby denied.
2. That Cabot Titania is hereby ordered to cease and desist immediately upon the final adoption of these orders the discharge of industrial waste which contains polluting properties or which violates applicable water quality standards.
3. That Cabot Titania submit to the Division of Engineering of the Ohio Department of Health weekly laboratory reports certified as accurate by an independent laboratory of an eight-hour composite sample which is certified by an officer of the company under oath as representative of the waste treatment practice during production.
4. That Cabot Titania participate in a program of restoration of Field Brook as directed by the Water Pollution Control Board following the Board's detailed analysis of possible restoration measures.

The above Board orders are being proposed to attain stream water quality standards.

Pursuant to Ohio Revised Code, Sections 119.06 and 119.07, you are entitled to a hearing prior to the finalization of the above orders. Your request for a hearing must be received by the Ohio Water Pollution Control Board within thirty (30) days of the time of mailing of this notice. You may appear in person, or be represented by your attorney, or by such other representative as is permitted to practice before this Board, or you may present your position, arguments, or contentions in writing and at the hearing you may present evidence and examine witnesses appearing for and against you.

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Cabot Titania, Inc.
Titanium Dioxide Unit

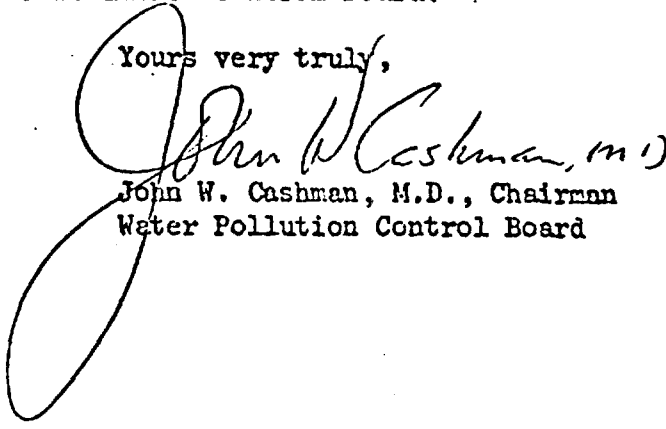
-3-

April 14, 1972

Please note that Sections 6111.07 (A) and 6111.99 of the Revised Code make it a criminal misdemeanor to violate any duties imposed by the Water Pollution Control Board. It is the Board's intent to secure compliance by any appropriate legal means.

By Order of the Water Pollution Control Board.

Yours very truly,


John W. Cashman, M.D., Chairman
Water Pollution Control Board

Certified mail

cc: Attorney General
cc: Health Commissioner
cc: District Office

SCM

000779

State of Ohio

Address Reply to:

Engineer-Secretary
450 East Town Street
P. C. Box 118
Columbus, Ohio 43216



Department of Health Water Pollution Control Board

Re: Ashtabula County .
Ashtabula Township .
Ind. Wastes-Sew..

April 14, 1972

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Gentlemen:

As a result of Board action April 11, 1972, and pursuant to Ohio Revised Code, Section 6111.03 (H) and (J), the Ohio Water Pollution Control Board proposes to adopt, at its next regular meeting, the following Findings and Orders in response to the application of Cabot Titania, Inc., Titanium Tetrachloride Unit, located on Field Brook:

PROPOSED FINDINGS

1. That the application of Cabot Titania, Inc., Titanium Tetrachloride Unit, for a permit under Chapter 6111 of the Ohio Revised Code was properly filed with the Water Pollution Control Board.
2. That the applicant has failed to remove the polluting properties from its industrial waste,
3. That the applicant's failure to remove the polluting properties from its industrial waste has and is resulting in violation of the applicable water quality standards.
4. That it is technically feasible and economically reasonable to remove the polluting properties from the applicant's industrial waste.
5. That the failure of the applicant to remove the polluting properties from its industrial waste results in a denial of legitimate beneficial uses of waters of the State of Ohio.

SCM

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April 14, 1972

PROPOSED ORDERS

1. That Cabot Titania's application for a permit is hereby denied.
2. That Cabot Titania is hereby ordered to cease and desist immediately upon the final adoption of these orders the discharge of industrial waste which contains polluting properties or which violates applicable water quality standards.
3. That Cabot Titania submit to the Division of Engineering of the Ohio Department of Health weekly laboratory reports certified as accurate by an independent laboratory of an eight-hour composite sample which is certified by an officer of the company under oath as representative of the waste treatment practice during production.
4. That Cabot Titania participate in a program of restoration of Field Brook as directed by the Water Pollution Control Board following the Board's detailed analysis of possible restoration measures.

The above Board orders are being proposed to attain stream water quality standards.

Pursuant to Ohio Revised Code, Sections 119.06 and 119.07, you are entitled to a hearing prior to the finalization of the above orders. Your request for a hearing must be received by the Ohio Water Pollution Control Board within thirty (30) days of the time of mailing of this notice. You may appear in person, or be represented by your attorney, or by such other representative as is permitted to practice before this Board, or you may present your position, arguments, or contentions in writing and at the hearing you may present evidence and examine witnesses appearing for and against you.

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Cabot Titania, Inc.
Titanium Tetrachloride Unit

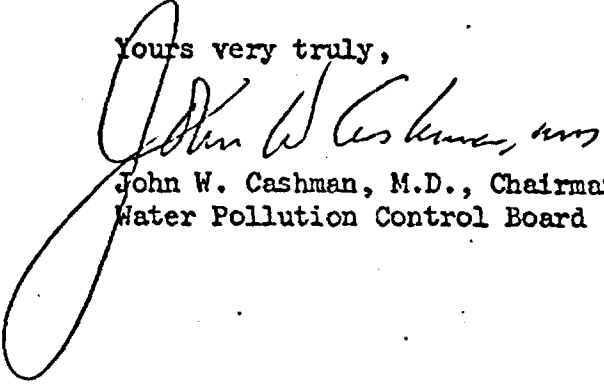
-3-

April 14, 1972

Please note that Sections 6111.07 (A) and 6111.99 of the Revised Code make it a criminal misdemeanor to violate any duties imposed by the Water Pollution Control Board. It is the Board's intent to secure compliance by any appropriate legal means.

By Order of the Water Pollution Control Board.

Yours very truly,



John W. Cashman, M.D., Chairman
Water Pollution Control Board

Certified mail

cc: Attorney General
cc: Health Commissioner
cc: District Office

000782

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CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA

AREA CODE 216 997-5501

May 4, 1972

John W. Cashman, M.D., Chairman
Water Pollution Control Board
Department of Health
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Re: Ashtabula County
Ashtabula Township
Industrial Wastes-Sew.

Dear Sirs:

Cabot Titania Inc. has received your correspondence dated April 14, 1972 in relationship to our Titanium Dioxide Unit. In said letter you advise that pursuant to Ohio Revised Code, Section 119.06 and 119.07, we are entitled to a hearing prior to the finalization of orders referred to in your letter, and that such a request must be received by the Ohio Water Pollution Control Board within thirty (30) days of the time of mailing of your notice, namely April 14, 1972.

Please be advised that Cabot Titania Inc., Titanium Dioxide Unit, does hereby request such a hearing, at your Columbus office, and would appreciate your advising of the date of same.

Mr. E. Terry Warren, of Warren & Young, Attorneys at Law, Peoples Savings and Loan Building, 4438 Main Avenue, Ashtabula, Ohio 44004, is our legal counsel regarding this matter.

Yours very truly,

Fred R. Mohrmann
Plant Manager

FRM/pk

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000773



CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

June 8, 1972

Mr. J. E. Richards, P.E.
Division of Engineering
Ohio Department of Health
P. O. Box 118
Columbus, Ohio 43216

Re: Waste Treatment Facilities

Gentlemen:

In accordance with your letter of August 13, 1971, please be advised that the referenced project construction starting date was March 12, 1972.

Construction is now proceeding normally but somewhat behind our estimated schedule. A full status report is enclosed for your information. We were substantially delayed by unexpected requirements for additional technical research and re-engineering which have resulted in a major increase in the size and cost of the facility. In addition, we were delayed somewhat by uncertainty concerning the effect on the referenced project of your letter of April 14, 1972.

We now estimate that the facility will be constructed, ready for testing, by October 15, 1972, and that testing will take four to six weeks thereafter. Therefore, we wish to request that the condition of your letter of August 13, 1971 requiring completion of construction by September 1, 1972 be amended to allow completion of construction on or before October 15, 1972. Naturally in the interim, we will use our best efforts to complete construction as close to September 1, 1972 as is possible.

Our effluent now generally meets applicable criteria. Completion of the referenced project will preclude non-complying emissions caused by occasional unusual operating conditions.

Very truly yours,

Fred R. Mohrmann
Plant Manager

FRM/pk

000774

SCM
SCM

UNITED STATES DISTRICT COURT
FOR THE
Northern District of Ohio

To Cabot Titania Corporation
Box 160 Middle Road
Ashtabula, Ohio
Address _____

Docket No. CR. 71-304

In accordance with authority conferred by the United States Probation Law, you have been placed on probation this date, April 24, 1972, for a period of One (1) Year by the Hon. Thomas D. Lambros, United States District Judge, sitting in and for this District Court at Cleveland, Ohio.

CONDITIONS OF PROBATION

It is the order of the Court that you shall comply with the following conditions of probation:

- ~~(1) You shall refrain from violation of any law (federal, state, and local). You shall get in touch immediately with your probation officer if arrested or questioned by a law-enforcement officer.~~
- ~~(2) You shall associate only with law-abiding persons and maintain reasonable hours.~~
- ~~(3) You shall work regularly at a lawful occupation and support your legal dependents, if any, to the best of your ability. When out of work you shall notify your probation officer at once. You shall consult him prior to job changes.~~
- ~~(4) You shall not leave the judicial district without permission of the probation officer.~~
- ~~(5) You shall notify your probation officer immediately of any change in your place of residence.~~
- ~~(6) You shall follow the probation officer's instructions and advice.~~
- ~~(7) You shall report to the probation officer as directed.~~

The special conditions ordered by the Court are as follows:

That they comply with the established plan to abate existing pollution as noted within the Indictment.

I understand that the Court may change the conditions of probation, reduce or extend the period of probation, and at any time during the probation period or within the maximum probation period of 5 years permitted by law, may issue a warrant and revoke probation for a violation occurring during the probation period.

I have read or had read to me the above conditions of probation. I fully understand them and I will abide by them.

By Plant Manager
(Signed) Frank R. Robinson Plt. Mgr. 4/24/72
Probationer Date

You will report as follows:

As directed by Mr. Albert A. Cobb, Supervising U. S. Probation Officer, 434 U. S. Court House, Cleveland, Ohio 44114 (Tel. 522-4225).

Albert A. Cobb 4-24-72
U. S. Probation Officer Date

SCM

000775

PLEASE RETURN TO:

FILE TEC. 072

February 26, 1963

Mr. G. A. Hall
Engineer--Secretary
Water Pollution Control Board
306 Ohio Department Bldg.
Columbus 15, Ohio

Dear Mr. Hall:

We have completed the renewal application form for Permit No. 1463.4 for discharge of industrial wastes. As your records will show, the previous permit was issued to the titanium tetrachloride department of National Distillers & Chemical Corp. This plant was purchased by Cabot Titania Corp. from National Distillers late in January. However, National has leased the plant from Cabot Titania and is continuing to operate the plant in the same manner as it was operated when Permit No. 1463.4 was issued. Though National Distillers is continuing to operate the plant, since it is now owned by Cabot Titania we assume that the application should be filed by the owning company rather than the operating company.

We trust our application will meet with your approval. If further information is required, please let us know and we will see that it is forwarded at once.

For your information, all correspondence should be sent to Cabot Titania Corporation, Attention.

Yours very truly,

T. H. Goodgame, Manager
Ashtabula Facilities

THG:kf
Enclosure

SCM

cc: RA GJD
JGW F. Fahnoe

000783

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial wastes and sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River--Lake Erie
6. Is Discharge Treated? --- Yes ☒ No ☐
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
* (No. 1463,4). Refer to application submitted 3/7/56 by original owner, Stouffer, Co. (per H. Wynn): All conditions described therein are true
Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.
* Expires April 1, 1963 // and valid as concerns our present operation of this facility.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official Thomas H. Goodgame
Title Manager, Ashtabula Facilities
Post Office Address Cabot Titania Corp.
P. O. Box 160
Ashtabula, Ohio

VERIFICATION

Thomas H. Goodgame, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant Thomas H. Goodgame

Sworn to in presence of this 25 day of January, 1963
at Ashtabula, County of Ashtabula, And State of Ohio.

Signature of Officer Wm. J. L. Smith
Official Title Commissioner of Health

SCM

**Re: Ashtabula County
Ashtabula Township
Eng. Martin-Gov.**

May 10, 1962

**U.S. Industrial Chemicals Co. Div.
National Distillers & Chemical Corp.
P. O. Box 720
Ashtabula, Ohio**

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Department into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires April 1, 1963. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of facilities which have been provided for the treatment and disposal of the sanitary sewage of this titanium tetrachloride plant.
2. The satisfactory maintenance and operation of industrial wastes treatment and disposal facilities; submitting to the Department of Sanitary Engineering, Ohio Department of Health, at regular monthly intervals, reports to include operating and analytical data pertinent to the operation and maintenance of the facilities.

Because of the number of complaints which have been received concerning the condition of Fields Brook, you are requested to exercise diligence in the operation of the wastes treatment facilities in order to assure a satisfactory effluent at all times.

Yours very truly,

C000785

**Ralph E. Dwork, M.D., Chairman
Water Pollution Control Board**

**Enc.-Permit 1463.4
Certified mail
cc: Health Commissioner
cc: District Office**

PLEASE RETURN TO:

SCM

FORM RMI-401

ROUTING SLIP

DATE Feb. 21, 1963

TO: 1 Dr. T. H. Goodgame
2 _____
3 - As you requested this p.m.,
4 attached are copies of the
5 application we submitted on
6 the TiCl₄ Plant last year and
7 the cover letter - which may
8 be helpful in making out your
application.

☐ RETURN WITH COMMENT
☐ FOR YOUR ACTION
☐ FOR YOUR INFORMATION
☐ NOTE AND PASS ON
☒ AT YOUR REQUEST
☐ FOR YOUR APPROVAL
☐ PLEASE SIGN
☐ RETURN FOR FILE

REMARKS: _____

SIGNED

F. Fahnoe/hm

SCM

600786

Form No. _____

Date of Board Action _____

**WATER POLLUTION CONTROL BOARD
DEPARTMENT OF HEALTH
STATE OF OHIO**

**PERMIT APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Titanium Tetrachloride Dept., National Distillers & Chemical Corp.

2. Location State Road, Ashtabula, Ohio

3. Type of Establishment (If not a political subdivision) Chemical Manufacturing

4. Type of Discharge Industrial wastes and sewage

5. Body of Water Receiving Discharge Fields Creek

(a) Next larger receiving tributary Ashtabula River - Lake Erie

6. Is Discharge Treated? --- Yes ☒ No ☐

7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit.

• (No. 1482.3) Ashtabula application submitted 7/7/58 by owner, Stauffer Co. (per H. Wynn): All conditions therein described remain true and valid as concerns our present operation of this facility.
Supplemental information submitted in connection with this application will be treated as confidential by the Board.

Submission of this application constitutes a waiver by the applicant of any rights or exemptions provided by law.

• Expires April 1, 1962

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.09, Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereof, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official William A. Tabor

Title Operations Manager, Titanium Tetrachloride Division

Post Office Address National Distillers & Chemical Corp.

P. O. Box 730
Ashtabula, Ohio

VERIFICATION

Frederick Fannon, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant [Signature]

Seems to be subscribed in my presence this 28th day of February, 19 62

at Ashtabula, County of Ashtabula And State of Ohio

Signature of Officer [Signature]

Official Title Notary Public

SCM

C00787

**New Name - National Distillers And Chemical Corp.
Metals Reduction Plant and
Titanium Tetrachloride Plant**

**Ashtabula, O.
February 28, 1962**

**State of Ohio Department of Health
Water Pollution Control Board
806 Ohio Department Building
Columbus 15, Ohio**

**Attention: Mr. G. A. Hall, Engineer-Secretary
Water Pollution Control Board**

Gentlemen:

**We have completed the renewal application forms
pertaining to Permits No. 1488.3 and No. 1489.3 for
discharge of industrial waste.**

**We trust our applications will meet with your approval.
If further information is required, please let us know
and we will see that it is forwarded at once.**

**Future reminder notices should be directed to the
attention of the writer.**

Yours very truly,

NATIONAL DISTILLERS & CHEMICAL CORP.

**Frederick Fahnestock,
Operations Manager
Metals Reduction Division**

FF:lm

Encia/2

PLEASE RETURN TO:

FILE NO. 072

000788

SCM

*F. F. Fahnestock Hall
3-26-62 -
Permits will remain
old - delay due to
confusion over
name change.*

STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address Reply to:

G. A. Hall
Engineer-Secretary
306 Ohio Departments Building
Columbus 15, Ohio

SPECIAL NOTICE

RENEWAL APPLICATION NECESSARY

Attention is called to the approaching expiration date of your permit for discharge to waters of the state. Renewal of permit is contingent upon compliance with conditions set forth in the letter accompanying the permit, a copy of which is attached.

Application for renewal of permit should be filed promptly. Two forms are enclosed, only one of which need be filed with the Board.

Under Item 7 of the form, explanation should be made concerning compliance with the conditions for renewal of the present permit. If for any reason the conditions have not been fulfilled, a complete explanation should be provided.

Enc.

G. A. Hall
Engineer-Secretary
Water Pollution Control Board

SCM

COH

FILED IN 100-100
FILED IN 100-100
622

000789

U. S. INDUSTRIAL CHEMICALS CO.

DIVISION OF NATIONAL DISTILLERS AND CHEMICAL CORPORATION

METALS REDUCTION PLANT

STATE ROAD AND E. 21ST STREET • ASHTABULA, OHIO

February 6, 1963

Dr. T. H. Goodgame
Cabot Titania Corp.
P. O. Box 160
Ashtabula, O.

Subject: Waste Disposal Permits -
Titanium Tetrachloride Plant

Dear Tom:

We currently are operating the Titanium Tetrachloride Plant under the State of Ohio Pollution Permit No. 1463.4 which expires April 1, 1963.

In view of the fact that you have acquired title to the Titanium Tetrachloride facilities as of Jan. 31, 1963, I think you should immediately make application to the State of Ohio for the proper waste disposal permits. At this time you should advise them of the change of ownership and indicate to them that U.S.I. will be operating the plant until lease termination and, therefore, the operating reports will be prepared by U.S.I. and submitted to you for approval and forwarding to Columbus. Based on our experience here, it will be necessary - because of the divided location - to prepare reports for both the oxide plant and the titanium tetrachloride facility.

If the above arrangement is agreeable to you, until April 1 we will submit our reports directly to Columbus under the existing permit. After this date, and until conclusion of the lease, we will prepare reports for your submission.

If there is any further information that we can supply to assist you in this matter, please do not hesitate to call upon us.

Yours very truly,
U. S. INDUSTRIAL CHEMICALS CO.

Frederick Fahnoe
Frederick Fahnoe
Operations Manager
Metals Reduction Plant

COG730

PLEASE RETURN TO:
C22

FF:hm

SCM

11 Feb '63
Tom - called Fred,
this can wait
a few days til
you get here,
HW.

U. S. INDUSTRIAL CHEMICALS CO.

BCC: R.L. Swain w/encls.
J.A. Stark
T.H. Goodgame-Cabot Titania
File

April 16, 1963

PLEASE RETURN TO:
FILE TEC 072

Mr. G. A. Hall, Engr.-Secretary
Water Pollution Control Board
306 Ohio Departments Building
Columbus 15, Ohio

Dear Mr. Hall:

Our March, 1963 reports on sewer effluent analyses for the Metals Reduction Plant (Permit No. 1453.4) and the Titanium Tetrachloride Plant (Permit No. 1463.4) are enclosed for your review and approval. Both plants are located in Ashtabula, Ohio at State Rd. and East 21st St.

These reports are submitted in accordance with the conditions set forth in our permits for discharge of industrial waste into the "Waters of the State" - as provided by the Water Pollution Control Act of Ohio.

Our Renewal application form covering Permit No. 1453.4 (which expired April 1, 1963) was forwarded to you on February 6, 1963. We trust the renewal request was approved and that our new permit will be issued in the near future. A new permit for the Titanium Tetrachloride Plant has been requested by Cabot Titania Corporation, the new owners of that facility.

Very truly yours,

U. S. INDUSTRIAL CHEMICALS CO.

Frederick Fahnnoe
Operations Manager
Metals Reduction Plant

SCM

FF:hm

Enclosed Reports

C00792

WATER POLLUTION CONTROL REPORT

F. S. INDUSTRIAL CHEMICALS CO.

**Titanium Tetrachloride Dept.
(Formerly Stauffer Chemical Plant)**

Permit No. 1463.4

<u>Date of Sampling</u>	<u>Analysis</u>	<u>Upstream Of Effluent Discharge</u>	<u>Downstream Of Effluent Discharge</u>
March 4, 1963	pH	7.9	7.5
	Chlorides (ppm)	238	288
	Total Solids (ppm)	290	388
	Suspended Solids (ppm)	nil	48
March 18, 1963	pH	7.1	3.9
	Chlorides (ppm)	121	185
	Total Solids (ppm)	429	533
	Suspended Solids (ppm)	15	13

*

SCM

000793

WATER POLLUTION CONTROL REPORT
D. S. INDUSTRIAL CHEMICALS CO.

Metals Reduction Plant

Permit No. 1459.4

<u>Date of Sampling</u>	<u>Analysis</u>	<u>Upstream Of Effluent Discharge</u>	<u>Downstream Of Effluent Discharge</u>
March 14, 1963	pH	2.6	7.0
	Chlorides (ppm)	2100	245
	Total Solids (ppm)	2790	245
	Suspended Solids (ppm)	10	25
March 28, 1963	pH	7.3	7.3
	Chlorides (ppm)	286	289
	Total Solids (ppm)	737	743
	Suspended Solids (ppm)	17	16

*

SCM

State of Ohio

Address Reply to:

G. A. HALL

Engineer-Secretary
306 Ohio Departments Building
Columbus 15, Ohio



T. A. GARDNER
~~WARREN H. CHASE~~ M.D., M.P.H.
Chairman

WARREN H. CHASE
Vice Chairman
~~WARREN H. CHASE~~ FRED E. MORR
BARTON HOLL
C. A. HARRELL

Department of Health *Water Pollution Control Board*

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

April 26, 1963

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio

Attention Mr. Thomas H. Goodgame, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your establishment into the "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires April 1, 1964. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of facilities which have been provided for the treatment and disposal of the sanitary sewage of this plant.
2. The satisfactory maintenance and operation of industrial wastes treatment and disposal facilities; submitting to the Division of Sanitary Engineering, Ohio Department of Health, at regular monthly intervals, reports to include information and analytical data pertinent to the operation and performance of the facilities.

Because of past complaints which have been received concerning the condition of Fields Brook, you are requested to exercise diligence in the operation of the wastes treatment facilities in order to assure a satisfactory effluent at all times.

SCM

Yours very truly,

T. A. Gardner M.D.

T. A. Gardner, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.5

Certified mail

cc: Health Commissioner

cc: District Office

C00794

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.5

Date Issued April 26, 1963

Expiration Date April 1, 1964

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Fields Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,
Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject
to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

J. A. Gardner M.D.
CHAIRMAN

562003

WGS

STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address Reply to:

G. A. Hall
Engineer-Secretary
306 Ohio Departments Building
Columbus 15, Ohio

SPECIAL NOTICE

RENEWAL APPLICATION NECESSARY

Attention is called to the approaching expiration date of your permit for discharge to waters of the state. Renewal of permit is contingent upon compliance with conditions set forth in the letter accompanying the permit, a copy of which is attached.

Application for renewal of permit should be filed promptly. Two forms are enclosed, only one of which need be filed with the Board.

Under Item 7 of the form, explanation should be made concerning compliance with the conditions for renewal of the present permit. If for any reason the conditions have not been fulfilled, a complete explanation should be provided.

Enc.

G. A. Hall
Engineer-Secretary
Water Pollution Control Board

SCM

FILED 100-100
FILED 100-100
072

000797

PLEASE RETURN TO:

FILE NO. C72

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

April 26, 1963

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio

Attention Mr. Thomas H. Goodgame, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your establishment into the "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires April 1, 1964. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of facilities which have been provided for the treatment and disposal of the sanitary sewage of this plant.
2. The satisfactory maintenance and operation of industrial wastes treatment and disposal facilities; submitting to the Division of Sanitary Engineering, Ohio Department of Health, at regular monthly intervals, reports to include information and analytical data pertinent to the operation and performance of the facilities.

In view of past complaints which have been received concerning the condition of Fields Brook, you are requested to exercise diligence in the operation of the wastes treatment facilities in order to assure a satisfactory effluent at all times.

Yours very truly,

T. A. Gardner, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.5
Certified mail
cc: Health Commissioner
cc: District Office

000798

SCM

(Do Not Write in This Space)

Application No. _____

Date Received _____

(Do Not Write in This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

DEPARTMENT OF HEALTH
STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State Avenue & Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing -
Titanium Tetrachloride
4. Type of Discharge Industrial wastes and sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River, Lake Erie
6. Is Discharge Treated? --- Yes X No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1462.5). Refer to application submitted 3/7/56 by original owner
Stauffer Co (per H. Wynn): All conditions described therein are true
Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.
*Expires April 1, 1964 and valid as concerns our present operation
of this facility

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official Thomas H. Goodgame
Title Manager, Ashtabula Facilities
Post Office Address Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio

VERIFICATION

Thomas H. Goodgame, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant Thomas H. Goodgame

Sworn to on subscribed in my presence this 18th day of Feb, 1964.
at Ashtabula, County of Ashtabula And State of Ohio

Signature of Officer Robert E. Dempster
Official Title ROBERT E. DEMPSTER, Notary Public
My Commission Expires April 30, 1968

SCM

000799

JEC-072

CALOT

CALOT TITANIA CORPORATION

P. O. BOX 160, ASHTABULA, OHIO

February 13, 1964

**Mr. G. A. Hall, Engr.-Secretary
Water Pollution Control Board
306 Ohio Departments Building
Columbus 15, Ohio**

Dear Mr. Hall:

We have completed the renewal application form, Permit No. 1463.5 for discharge of industrial waste. This renewal permit is for the Titanium Tetrachloride unit of our facilities here in Ashtabula, Ohio.

We trust our application will meet with your approval. If further information is required, please let us know and we will see that it is forwarded at once.

Yours very truly,

Calot Titania Corporation

T. H. Goodgame, Manager
Ashtabula Facilities

THG/pk

bcc: RGH

SCM

FILE TEC

CC0796

State of Ohio

Address Reply to:

G. A. HALL

Engineer-Secretary
306 Ohio Departments Building
Columbus, Ohio 43215



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
BARTON HOLL
SHARON D. BRESLER

Department of Health *Water Pollution Control Board*

Re: Ashtabula County
Ashtabula Township
Ind.Wastes-Sew.

June 11, 1964

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio

PLEASE RETURN TO:
FILE TEO 013

Attention Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your establishment into the "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires April 1, 1965. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of facilities which have been provided for the treatment and disposal of the sanitary sewage of this plant.
2. The satisfactory maintenance and operation of industrial wastes treatment and disposal facilities which have been provided for the neutralization and clarification of wastes of this plant.
3. The submission to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, of reports to include information pertinent to the operation and performance of the industrial wastes treatment and disposal facilities.

You are requested to exercise diligence in the operation of the wastes treatment facilities in order to assure a satisfactory effluent at all times.

SCM

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

COO800

Enc.-Permit 1463.6
Certified mail
cc: Health Commissioner
cc: District Office

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.6

Date Issued June 11, 1964

Expiration Date April 1, 1965

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Ashtabula Township, Ashtabula County, Ohio

SCM
C00301

has been granted permission to discharge industrial wastes and sanitary sewage
into waters of the state, Fields Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,
Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject
to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO

April 20, 1965

Mr. G. A. Hall
Engineer-Secretary
306 Ohio Departments Building
Columbus 15, Ohio

Dear Mr. Hall:

I received a second and final notice for the renewal of our permit under the Water Pollution Control Act today. On March 2, 1965 our application was forwarded to you by me which is apparently for the Titanium Dioxide unit only; this being an oversight on my part.

Enclosed is a renewal application for the Titanium Tetrachloride unit, Permit 1463. 6.

Since we basically are a single product producer in this location, would it be possible to have a single permit for both units to eliminate the possibility of someone in the future neglecting to file for a permit as I have done on this occasion.

Yours very truly,

Cabot Titania Corporation

D. Brittain Briggs
Manager

DEB/pk
enc: Permit 1463. 6
c/letter 3/2/65

SCM

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STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address Reply to:

G. A. Hall
Engineer-Secretary
306 Ohio Departments Building
Columbus 15, Ohio

SECOND AND FINAL NOTICE

RENEWAL APPLICATION NECESSARY

A previous notice was mailed to you concerning your permit for discharge to waters of the state. No application for renewal of this permit has as yet been received from you.

It should be noted that after the expiration date you are in violation of the Water Pollution Control Act unless you have applied for renewal of your permit.

Two forms are enclosed, only one of which need be filed with the Board. You are urged to immediately file your application with pertinent information so that renewal of the expired permit may be recommended.

Enc.

G. A. Hall
Engineer-Secretary
Water Pollution Control Board

SCM

ODH

C00803

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State & Middle Roads, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial wastes and sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula Rive, - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463.6).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.03 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Manager, Ashtabula Facilities

Post Office Address Cabot Titania Corporation

P.O. Box 160, Ashtabula, Ohio

VERIFICATION

D. Brittain Briggs, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this 20th day of April, 1965,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title _____

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

DEPARTMENT OF HEALTH

STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State & Middle Roads, Ashtabula, Ohio
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(a) Next larger receiving tributary Ashtabula River - Lake Erie
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7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463.6).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.03 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereof, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Manager, Ashtabula Facilities

Post Office Address Cabot Titania Corporation

P.O. Box 160, Ashtabula, Ohio

VERIFICATION

D. Brittain Briggs, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this 20th day of April, 1965,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title _____



CABOT TITANIA CORPORATION

P. O. BOX 160, ASHTABULA, OHIO

June 18, 1965

Mr. G. A. Hall, Engr.-Secty.
Water Pollution Control Board
306 Ohio Departments Building
Columbus, Ohio 43215

Dear Mr. Hall:

In conjunction with the renewal application dated April 29, 1965 for Permit No. 1463.1 for Cabot Titania's Titanium Tetrachloride unit, I am forwarding the following additional information on our waste disposal system for your approval.

The waste disposal system at the Titanium Tetrachloride unit has not been changed substantially to my knowledge since the original installation in 1958. You received some details on the installation when the original application was submitted by Mr. H. Wynn of Stauffer Company but I do not know the content of that information. At the present time we are in the process of expanding this unit 60% and are proposing to make some modifications to the waste disposal system. Our drawings showing these modifications are not complete at this time but will be forwarded to you when they are finished. In conjunction with this expansion we desire to install cooling towers to recirculate the process water thereby reducing effluent rate to a level below the present rates. We have found some areas in our effluent system where our operation may presently be inefficient and in conjunction with the expansion, we will make modifications to maintain better control of the system.

In addition to the above, the following changes are proposed for your consideration:

- 1) The re-routing of some sewers which may at times contain contaminated water to the settling ponds.
- 2) Installation of a pH indicator-controller on the material going to the settling ponds which will control the pH of this stream with a lime slurry.
- 3) An additional settling pond will be installed.
- 4) The final settling ponds will be equipped with baffles and overflow weirs to distribute the flow through the pond and skim off the clear water.

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 attached is the final effluent flow and composition under two conditions for our Titanium Tetrachloride unit.

Exhibit A - Effluent characteristics for 1965

Exhibit B - Effluent characteristics with increased production with a cooling tower.

I hope this information will be sufficient for granting the permit but if you require any further information, we will be happy to send it to you. If it is desirable for me to come to Columbus to discuss these changes with you personally, I will be happy to do so.

Very truly yours,

Cabot Titania Corporation

D. Brittain Briggs, Manager
Ashtabula Facilities 

DBB/pk

Enc: Exhibit A
Exhibit B

bcc: DEOM

SCM

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Exhibit A

Cabot Titania Titanium Tetrachloride Unit
Effluent to Fields Brook - 1965

<u>Material</u>	<u>#/Day</u>	<u>ppm</u>
Total Quantity	22,800,000	----
Suspended Solids	Neg.	Neg.
Total Cl^-	17,400	762
Total Al^{+++}	9,900	434
Fe^{++++}	Neg.	Neg.
Al^{+++}	Neg.	Neg.
$\text{CO}_3^{=}$	Reaches equilibrium with atmosphere	
pH 6.5 - 9.0		

6/18/65

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Exhibit B

Cabot Titania Titanium Tetrachloride Unit
Effluent to Fields Brook with Increased Production
(With Cooling Tower)

<u>Material</u>	<u>#/Day</u>	<u>ppm</u>
Total Quantity	11,880,000	----
Suspended Solids	Neg.	Neg.
Total Cl^-	29,100	2435
Ca ⁺⁺	16,400	1388
Fe ⁺⁺⁺	Neg.	Neg.
Al ⁺⁺⁺	Neg.	Neg.
CO ₃ ⁼	Reaches equilibrium with atmosphere	

pH 6.5 - 9.0

6/18/65

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1. F. 1.

Columbus, Ohio 43216



SHARON D. BRESLER

Department of Health

Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

August 6, 1965

Cabot Titania Corporation

P. O. Box 160

Ashtabula, Ohio 44004

Attention Mr. D. Brittain Briggs, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires January 1, 1966. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of the wastes treatment facilities provided in order to obtain the maximum performance of these devices; submitting to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, reports including information and analytical data pertinent to the operation and performance of the wastes treatment and disposal facilities.
2. Continued participation in the Ashtabula Township Industrial Association for the evaluation of the effects of the discharge from various industries on the waters of Fields Brook.
3. The evaluation of data obtained by the Ashtabula Township Industrial Association as it applies in particular to the effluent of this plant and the submission of a proposal for any corrective measures necessary.
4. The installation of in-plant facilities that will reduce the critical characteristics in the effluent.

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Cabot Titania Corporation
Titanium Tetrachloride Unit
Ashtabula, Ohio

-2-

August 6, 1965

5. The prompt reporting of the occurrence and cause of accidental or intermittent discharges of any wastes which by reason of their volume or characteristics, or both, may have a deleterious effect on the stream from the standpoint of downstream legitimate uses.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.7

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000811

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.7

Date Issued August 6, 1965

Expiration Date January 1, 1966

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Fields Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,
Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject
to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. D. W. [Signature]

CHAIRMAN

000012

SCM

STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address Reply to:

G. A. Hall
Engineer-Secretary
P. O. Box 118
Columbus, Ohio 43216

SPECIAL NOTICE

RENEWAL APPLICATION NECESSARY

Attention is called to the approaching expiration date of your permit for discharge to waters of the state. Renewal of permit is contingent upon compliance with conditions set forth in the letter accompanying the permit, a copy of which is attached.

Application for renewal of permit should be filed promptly. Two forms are enclosed, only one of which need be filed with the Board.

Under Item 7 of the form, explanation should be made concerning compliance with the conditions for renewal of the present permit. If for any reason the conditions have not been fulfilled, a complete explanation should be provided.



G. A. Hall
Engineer-Secretary
Water Pollution Control Board

Enc.

SCM

000813

**Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Gov.**

August 6, 1965

**Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004**

Attention Mr. D. Brittain Briggs, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires January 1, 1966. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of the wastes treatment facilities provided in order to obtain the maximum performance of these devices; submitting to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, reports including information and analytical data pertinent to the operation and performance of the wastes treatment and disposal facilities.
2. Continued participation in the Ashtabula Township Industrial Association for the evaluation of the effects of the discharge from various industries on the waters of Field's Brook.
3. The evaluation of data obtained by the Ashtabula Township Industrial Association as it applies in particular to the effluent of this plant and the submission of a proposal for any corrective measures necessary.
4. The installation of in-plant facilities that will reduce the critical characteristics in the effluent.

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Cable to the
Director, Department of
Health, Chicago

-4-

August 6, 1965

3. The prompt reporting of the occurrence and cause of accidental or intermittent discharges of any wastes which by reason of their volume or characteristics, or both, may have a deleterious effect on the stream from the standpoint of downstream legitimate uses.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

J. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.7

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000815

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State & Middle Roads, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial wastes and sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit (No. 1463).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board. Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Manager, Ashtabula Facilities

Post Office Address Cabot Titania Corporation
P. O. Box 160, Ashtabula, Ohio

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this 17th day of November, 1965,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer Robert E. Dempster

Official Title ROBERT E. DEMPSTER, Notary Public

My Commission Expires April 30, 1968

RECOMMENDATIONS AND CONCLUSIONS

(Agreed upon by Conferees from Michigan, Indiana, Ohio, Pennsylvania, New York and U. S. Public Health Service following conference under Section 8 of the Federal Water Pollution Control Act in the matter of pollution of the interstate and Ohio intrastate waters of Lake Erie and its tributaries held in Cleveland, Ohio August 3-6, 1965 and in Buffalo, New York, August 10-12, 1965)

1. The waters of Lake Erie within the United States are interstate waters within the meaning of Section 8 of the Federal Water Pollution Control Act. The waters of Lake Erie within the United States and its tributaries covered by sessions of this Conference are navigable waters within the meaning of Section 8 of the Federal Water Pollution Control Act.
2. Lake Erie and many of its tributaries are polluted. The main body of the Lake has deteriorated in quality at a rate many times greater than its normal aging processes, due to inputs of wastes resulting from the activities of man.
3. Identified pollutants contributing to damages to water uses in Lake Erie are sewage and industrial wastes, oils, silts, sediment, floating solids and nutrients (phosphates and nitrates). Enrichment of Lake Erie, caused by man-made contributions of nutrient materials, is proceeding at an alarming rate. Pollution in Lake Erie and many of its tributaries causes significant damage to recreation, commercial fishing, sport fishing, navigation, water supply, and esthetic values.

4. Eutrophication or over-fertilization of Lake Erie is of major concern. Problems are occurring along the lake shoreline at some water intakes and throughout the lake from algal growths stimulated by nutrients. Reduction of one or more of such nutrients will be beneficial in controlling algal growths and eutrophication.
5. Many sources of waste discharge reaching Lake Erie have inadequate waste treatment facilities. The delays in controlling this pollution are caused by the lack of such adequate facilities and the complex municipal, industrial, financial and biological nature of the problem.
6. Interstate pollution of Lake Erie exists. Discharges into Lake Erie and its tributaries from various sources are endangering the health or welfare of persons in states other than those in which such discharges originate, and in large measure this pollution is caused by nutrients which over-fertilize the lake. This pollution is subject to abatement under the Federal Water Pollution Control Act.
7. Municipal wastes be given secondary treatment or treatment of such nature as to effectuate the maximum reduction of BOD and phosphates as well as other deleterious substances.
8. Secondary treatment plants be so designed and operated as to maximize the removal of phosphates.

9. Disinfection of municipal waste effluents be practiced in a manner that will maintain coliform concentrations not to exceed 5,000 organisms per 100 ml at public water supply intakes, and not to exceed 1,000 organisms per 100 ml where and when the receiving waters in proximity to the discharge point are used for recreational purposes involving bodily contact. It is recognized that bathing water quality standards are established by statute in New York State.
10. All new sewerage facilities be designed to prevent the necessity of bypassing untreated waters.
11. Combined storm and sanitary sewers be prohibited in all newly-developed urban areas, and eliminated in existing areas wherever feasible. Existing combined sewer systems be patrolled and flow-regulating structures adjusted to convey the maximum practicable amount of combined flows to and through treatment plants.
12. Program be developed to prevent accidental spills of waste materials to Lake Erie and its tributaries. In-plant surveys with the purpose of preventing accidents are recommended.
13. Unusual increases in waste output and accidental spills be reported immediately to the appropriate State agency.
14. Disposal of garbage, trash, and other deleterious refuse in Lake Erie or its tributaries be prohibited and existing dumps along river banks and shores of the Lake be removed.

15. The conferees meet with representatives of Federal, state and local officials responsible for agricultural, highway and community development programs for the purpose of supporting satisfactory programs for the control of runoff which deleteriously affects water quality in Lake Erie.
16. Industrial plants improve practices for the segregation and treatment of waste to effect the maximum reductions of the following:
 - a. Acids and alkalies.
 - b. Oil and tarry substances.
 - c. Phenolic compounds and organic chemicals
that contribute to taste and odor problems.
 - d. Ammonia and other nitrogenous compounds.
 - e. Phosphorus compounds.
 - f. Suspended material.
 - g. Toxic and highly-colored wastes.
 - h. Oxygen-demanding substances
 - i. Excessive heat.
 - j. Foam-producing discharges.
 - k. Other wastes which detract from recreational uses,
esthetic enjoyment, or other beneficial uses of
the waters.

17. The Michigan, Indiana, Ohio, Pennsylvania and New York Water Pollution Control Agencies undertake action to insure that industrial plants discharging wastes into waters of Lake Erie and its tributaries within their respective jurisdictions institute programs of sampling their effluents to provide necessary information about waste outputs. Such sampling shall be conducted at such locations and with such frequency as to yield statistically reliable values of all waste outputs and to show their variations. Analyses to be so reported are to include where applicable: pH, oil, tarry residues, phenolics, ammonia, total nitrogen, cyanide, toxic materials, total biochemical oxygen demand, and all other substances listed in the preceding paragraph.
18. Waste results be reported in terms of both concentrations and load rates. Such information will be maintained in open files by the State agencies for all those having a legitimate interest in the information.
19. The Department of Health, Education, and Welfare establish water pollution surveillance stations at appropriate locations on Lake Erie. Surveillance of the tributaries will be the primary responsibility of the States. The Department of Health, Education, and Welfare will assist the States at such times as requested.
20. The Department of Health, Education and Welfare will be responsible for developing up-to-date information and experience concerning effective phosphate removal and control of combined sewer systems. This information will be reported to the conferees regularly.

21. Regional planning is often the most logical and economical approach toward meeting pollution problems. The water pollution control agencies of Indiana, Michigan, Pennsylvania, New York and Ohio, and the Department of Health, Education, and Welfare will encourage such regional planning activities.
22. Within six months after the issuance of this Summary, the State water pollution control agencies concerned will present a schedule of remedial action to the Conferees for their consideration and evaluation.
23. The Federal Conferee recommends the following for the consideration of the State agencies:
 - a. Recommended municipal treatment - Completion of plans and specifications August 1966, completion of financing February 1967, construction started August 1967, construction completed January 1, 1969, chlorination of effluents May 15, 1966, provision of stand-by and emergency equipment to prevent interruptions in operation of municipal treatment plants August 1966, patrolling of combined sewer systems immediately.
 - b. Discontinuance of garbage and trash dumping into waters immediately.
 - c. Industrial waste treatment facilities to be completed and in operation by January 1, 1969.

24. Federal installations waste treatment facilities to be completed and in operation by August of 1966.
25. Representatives of the United States Corps of Engineers meet with the Conferees, develop and put into action a satisfactory program for disposal of dredged material in Lake Erie and its tributaries which will satisfactorily protect water quality. Such a program is to be developed within six months after the issuance of this Summary and effectuated as soon as possible thereafter.
26. The conferees will establish a Technical Committee as soon as possible which will evaluate water quality problems in Lake Erie relating to nutrients and make recommendations to the conferees within six months after the issuance of the summary of the conference.
27. The Conference may be reconvened on the call of the Chairman.

At the conclusion of the Cleveland session of the conference the following was included among the conclusions and recommendations of the conference:

"Pollution of navigable waters subject to abatement under the Federal Water Pollution Control Act is occurring in the Ohio waters of Lake Erie and its tributaries. The discharges

causing and contributing to the pollution come from various municipal and industrial sources, from garbage, debris, and land runoff.

"Pollution of the Ohio waters of Lake Erie and its tributaries within the State of Ohio endangers health and welfare."

A question has been raised concerning the jurisdiction of this conference over intrastate Ohio waters. The conferees agreed to present this question to the Secretary of Health, Education and Welfare and the Governor of Ohio for clarification and resolution.

November 17, 1965

Mr. G. A. Hall, Engr.-Secty.
Water Pollution Control Board
306 Ohio Departments Building
Columbus, Ohio 43215

Dear Mr. Hall:

We are making renewal application for a permit to discharge industrial waste into Fields Brook. The application form and Permit No. 1463 is attached.



The following is a progress report on the action which we have taken since D. B. Briggs' letter of June 18, 1965 to you on the items listed in that letter:

- 1) All except one sewer have been routed to the settling ponds. One sewer which is not now routed to the settling ponds is an area drain outside of the immediate operating area but used on occasion by our maintenance force to wash out small pieces of equipment. Its effect on the quality of our effluent is negligible but we plan to tie it into the waste treatment facilities no later than June 30, 1966.
- 2) A pH control system has been designed (and forwarded ^{2 COPY - THE PLAN TO YOU}) which will control the addition of lime slurry to acid water entering our settling ponds. This equipment has not yet been received but will be installed when received.
- 3) Engineering is complete for an additional settling pond but construction has not yet commenced.
- 4) Baffles and weirs have been designed for all settling ponds but they are not yet installed.

SCM

000825

SHEET No. 2 FROM CABOT TITANIA CORPORATION To Mr. G. A. Hall

 to note the changes which are proposed above  the nature of treating the symptoms of our waste disposal problems at the $TiCl_4$ plant. We are only recently started in an intensive study to eliminate or minimize admission of the acid chloride wastes which cause our chief difficulty in maintaining clean effluent. We expect to finish this study in six to eight weeks and to initiate action promptly upon its completion.

Yours very truly,

Cabot Titania Corporation

Edward J. Holland, Manager
Ashtabula Facilities

EJH/pk

enc: Permit No. 1463
Titanium Tetrachloride Unit

bcc: DEO'M

SCM

000826

**Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.**

February 21, 1966

**Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004**

Attention Mr. Edward J. Holland, Manager

Gentlemen:

As a result of Board action February 8, 1966, enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires September 1, 1966. Renewal of this permit is contingent upon compliance with the following Orders:

1. The satisfactory maintenance and operation of the wastes treatment facilities provided in order to obtain the maximum performance of these devices; submitting to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, reports including information and analytical data pertinent to the operation and to the performance of the wastes treatment and disposal facilities.
2. Continued participation in the Ashtabula Township Industrial Wastes Study, the evaluation of the effluent of this plant and the effects of the discharge on the waters of Field Creek.
3. The completion of the additional industrial wastes treatment and control facilities now under construction.
4. The submission of a report setting forth information to indicate compliance with the Recommendations and Conclusions of the Lake Erie Conference (copy enclosed), with particular reference to Sections 12, 13, and 16.

SCM

000827

Cable: [redacted]
Titan: [redacted] Unit

-2-

February 21, 1966

Should you have any questions with respect to the above Orders,
please notify us promptly.

Yours very truly,

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.8
-Recom. & Concl.

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000828

State of Ohio

Address Reply to:

G. A. HALL
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
BARTON HOLL
SHARON D. BRESLER

Department of Health *Water Pollution Control Board*

Re: Ashtabula County
Ashtabula Township
Ind.Wastes-Sew.

February 21, 1966

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

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You will note that this permit expires September 1, 1966. Renewal of this permit is contingent upon compliance with the following Orders:

1. The satisfactory maintenance and operation of the wastes treatment facilities provided in order to obtain the maximum performance of these devices; submitting to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, reports including information and analytical data pertinent to the operation and to the performance of the wastes treatment and disposal facilities.
2. Continued participation in the Ashtabula Township Industrial Association in the evaluation of the effluent of this plant and of the effects of the discharge on the waters of Field Brook.
3. The completion of the additional industrial wastes treatment and control facilities now under construction.
4. The submission of a report setting forth information to indicate compliance with the Recommendations and Conclusions of the Lake Erie Conference (copy enclosed), with particular reference to Sections 12, 13, and 16.

SCM

000829

Cabot Titania Corporation
Titanium Tetrachloride Unit

-2-

February 21, 1966

Should you have any questions with respect to the above Orders,
please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.8
-Recom. & Concl.

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000830

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.8

Date Issued February 21, 1966

Expiration Date September 1, 1966

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

SCM

C00631

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

State of Ohio

Address Reply to:

G. A. HALL
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
BARTON HOLL
SHARON D. BRESLER

Department of Health *Water Pollution Control Board*

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

September 21, 1966

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires September 1, 1967. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of all facilities for the treatment and disposal of sanitary sewage and industrial wastes.
2. The submission to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, of reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. The prompt reporting to the Division of Engineering of the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
4. The submission to the Division of Engineering of information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.

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Cabot Titania Corporation
Titanium Tetrachloride Unit

-2-

September 21, 1966

5. The submission to and approval by the Ohio Department of Health of plans for compliance with the Recommendations and Conclusions of the Lake Erie Conference, with special reference to Sections 12, 13, and 16.
6. The completion of construction of facilities in accordance with approved plans required by condition No. 5.
7. The participation in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.9

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000813

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.9

Date Issued September 21, 1966

Expiration Date September 1, 1967

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

MS

000834

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

August 5, 1966

Mr. G. A. Hall
Engineer-Secretary
Water Pollution Control Board
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

We hereby apply for renewal of permits 1463 and 1824, application forms for which have been completed and are attached.

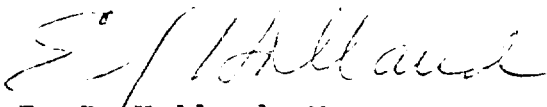
In support of our application, we are detailing in this letter and in the attached report our compliance with the orders listed in Dr. Arnold's letter of February 21, 1966. Specifically:

- 1) We have diligently maintained and operated the waste treatment facilities at our plants. We have submitted monthly reports to the Ohio Department of Health giving full information on the performance of these facilities.
- 2) We continue to participate actively in the Ashtabula Township Industrial Association's evaluation of the effect of our plant effluents upon Fields Brook.
- 3) We have completed installation of additional facilities as detailed in our report of February 8th.
- 4) We are attaching another report detailing our actions in 1966 in compliance with the recommendations and conclusions of the Lake Erie Conference.

In addition, we are participating actively in efforts to assist organization under Lake Erie Foundation leadership, thereby to assist the Ohio Water Pollution Control Board in its efforts to control the quality of water in the Lake Erie Basin.

Very truly yours,

CABOT TITANIA CORPORATION


E. J. Holland, Manager

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August 2, 1966

Waste Disposal
Cabot Titania Corporation - Ashtabula Plants

I. Progress Summary February 1 - August 1, 1966

On February 8, 1966, the Control Board was given a report on our performance up to that time. Copies of our report were given to Dr. Arnold and Mr. Richards along with an extra copy. The conclusion which we drew at that time, which was detailed in the report, was that we were meeting or exceeding the quality levels given in the guidelines of January, 1965 in all areas except one: settleable solids in the effluent stream from the $TiCl_4$ unit were 100-200 times the suggested 0.1 milliliter per liter guideline.

Accordingly, after laboratory research established possible means of cleaning the effluent stream, a pilot disposal plant was assembled and tested. Preliminary process design for a full-scale disposal plant, based on test data, is now complete. Engineering and procurement of the full-scale plant are proceeding. This project is being handled on a crash schedule, and completion is expected in December, 1966.

We fully expect a dramatic improvement in the quality of our waste effluent as a result of our work this year. While the quality of the effluent from the final test unit was somewhat variable, at no time did its settleable solids content exceed 50 parts per million, which is far better than the quality suggested by the guidelines. The appearance of the effluent was clear and colorless and its pH was a steady 8.0. We feel that we are justified in concluding that this quality level will meet or exceed any specifications which now exist or which might exist in the future.

II. Facilities Performance, January - June 1966

Table I, following, shows the quality of waste streams from both the $TiCl_4$ unit and the Oxides unit for the first half of calendar 1966. These data were also reported monthly to the Control Board, to ATIA, and to the consultant retained by ATIA. They are given in detail in Table II.

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August 2, 1966

TABLE I
Quality of Waste Streams from Cabot Titania Plants
January - June 1966

	<u>Oxides Unit</u>		<u>Chloride Unit</u>		<u>Guideline Level</u>
	<u>Normal</u>	<u>Peak</u>	<u>Normal</u>	<u>Peak</u>	
Settleable Solids, ml/l	0.1	46	28	120	0.1
pH	8.5	12.1	7.1	12.2	6.3 - 9.0
Cl ⁻ , ppm	130	1318	587	1495	4000

(Data from Ashtabula Township Industrial Association
Reports. See Table II.)

As in February, it seems clear from these data that
except for settleable solids from the chloride unit, effluent
water quality is being held within guideline levels.

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TABLE II
Average Data for One Month Periods (1966)

Date of Analyses	Chlorides (ppm)	Total Suspended Solids (ppm)	Settleable Solids (ml/l)	pH	Appearance	Odor
<u>Oxides Plant</u>						
January	410	277	11.6	9.2	Turbid	Musty
February	119	18	< 0.1	8.5	Slightly Turbid	Musty
March	128	57	< 0.1	8.3	Turbid	None
April	162	24	< 0.1	8.2	Slightly Turbid	Medicinal
May	122	25	< 0.1	8.3	Clear	None
June	105	22	< 0.1	7.9	Clear	None

<u>Chloride Plant</u>						
January	725	161	11.0	6.3	Slightly Turbid	Musty
February	336	903	15.5	9.2	Slightly Turbid	Medicinal
March	591	958	46.3	6.7	Turbid	None
April	414	396	33.3	8.4	Slightly Turbid	None
May	574	422	36.6	5.8	Turbid	Musty
June	888	117	22.2	6.6	Slightly Turbid	None

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August 2, 1966

TABLE III
New Facilities Added
January - June 1966

<u>Facility</u>	<u>Purpose</u>	<u>Date Complete</u>	<u>Cost</u>
<u>Oxides Unit</u>			
1. Larger chemical sump pump installed	To protect against sump overflow to storm sewer	2/15/66	\$ 3,000
2. New pond, baffles		4/15/66	16,000
3. High level alarm installed in chemical sump	Signals pump malfunction	4/15/66	1,800
4. Installed pH recorder	Monitors quality of waste stream	4/15/66	3,500
5. Conducted studies to minimize process losses. Designed process thickener modifications. Designed stack to eliminate most of chloride in liquid waste stream.	Reduction of quantity of waste	6/30/66	10,000
<u>Chloride Unit</u>			
1. Completed lab research, constructed and tested pilot waste treatment facility. Commenced engineering and procurement of full-scale facility, to provide clear effluent stream.	To provide settleable solids level in waste stream of less than 0.1 ml/l.	7/31/66	40,000
2. Designed, engineered and ordered prototype reactor collector.	To test feasibility of plan for reducing solid waste quantity.	6/30/66	10,000
3. Installed pH controller.	To hold pH of effluent within guidelines.	6/30/66	3,500

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August 2, 1966

TABLE IV
Waste Disposal Plans
August 1, 1966 and Later

<u>Project</u>	<u>Purpose</u>	<u>Estimated Complete</u>	<u>Cost</u>
<u>Oxides Unit</u>			
1. Modify thickener	Reduce solids losses	1/1/67	\$ 20,000
2. Erect disposal stack	Reduce chlorides losses in liquid waste stream	1/1/68	150,000
<u>Chloride Unit</u>			
1. Install thickener filter	Provide clear effluent	1/1/67	250,000
2. Install prototype reactor collector	Provide lower solids loss	1/1/67	125,000

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(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Corporation
2. Location State Rd. & Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial wastes and sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Manager, Ashtabula Facilities

Post Office Address Cabot Titania Corporation

P. O. Box 160, Ashtabula, Ohio

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this _____ day of _____, 1966,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title _____

SCM 0008411

1463

CABOT

CABOT TITANIA CORPORATION

P. O. BOX 160, ASHTABULA, OHIO 44004

August 2, 1967

Mr. G. A. Hall
Engineer-Secretary
Water Pollution Control Board
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

We hereby apply for renewal of permits 1463 and 1824, application forms for which have been completed and are enclosed.

In support of our application, we are enclosing two reports detailing our compliance with the Orders as listed in Dr. Arnold's letter of September 21, 1966.

Yours very truly,

Cabot Titania Incorporated

E. J. Holland
Plant Manager

EJH/pk

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INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

July 20, 1967

IN REPLY TO YOUR LETTER OF

SUBJECT: Water pollution control Permit Nos. 1824
 Re your memo of 7/17/67 1463

TO: E.J. Holland

FROM: H.A. Kiskadden

We are currently complying with the sampling, analytical and data reporting procedures outlined by the State and participating in the Ashtabula Township Industrial Association's program of water pollution control. In addition to this, as you know, we are monitoring our effluents for intermittent upsets. In view of this I feel that we are more than meeting State requirements in this area.

Since the regulations regarding discharges into the "Waters of the State" are quite general in nature, it is difficult to assess our standing as to the actual degree of pollution. What can be said, however, is that by comparison with other plants in our immediate area we look good and will look even better when TiCl₄ Unit effluent clarifier is lined out and in full operation.

As for the future, no changes are planned or presently seem necessary for the TiO₂ Unit. At the TiCl₄ Unit minor changes will have to be made in sampling procedures to comply with state requirements when the clarifier is working.

Overall, the TiO₂ Unit has met the requirements with infrequent exceptions. At the TiCl₄ Unit the exceptions have been more frequent but the new clarifier should solve that problem. We should have no problems if we don't relax.



H.A. Kiskadden

HAK:po
cc: GTC

000843

SCM

INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF 7/17/67

SUBJECT: Waste Disposal - Water Pollution Control Permit (No. 1463)

July 18, 1967

To: E. J. Holland

I see no problem in meeting any of the seven points in the letter to you from Mr. Arnold of the Water Pollution Control Board. We have not for the past several months adequately maintained the facilities, namely No. 2 and 3 ponds, because of our inability to clean those ponds while constructing the new waste disposal plant. As soon as the clarifier comes on stream, we should be able to clean the ponds out and they will provide the surge and "spare" for the clarifier. It should not therefore be necessary to make any reports of accidental or intermittent discharge as required by paragraph 3. The other things are matters of normal policy, or should become matters of normal plant policy under any circumstances.

Obviously, the most outstanding contribution that we can make at the moment to water pollution control in this area is to get the clarifier on stream. This I expect can be accomplished shortly although it will probably be necessary to make the changes which we have discussed in previous meetings, i.e. Spray Dryer Solids Discharge Control, and Better Sludge Pumping. These changes will be necessary before the waste disposal facility will be able to operate smoothly at full plant capacity. Once this is taken care of, I feel that we will have solved our water pollution problems and it will only be necessary to maintain and operate the unit.



L. W. Johnson

LWJ/pk

000844

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(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

DEPARTMENT OF HEALTH

STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location State Rd. & Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
1463
(No. _____).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Plant Manager, Ashtabula Facilities

Post Office Address Cabot Titania Corporation

P. O. Box 160, Ashtabula, Ohio

VERIFICATION

Edward J. Holland

_____, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this _____ day of _____, 1967,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title _____

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C00845

GENERAL INSTRUCTIONS

1. **Name** of applicant means municipality, political subdivision, public or private corporation, individual, partnership or other entity.
2. **Location** means municipality or township and county in Ohio.
3. **Type of Establishment** — The classification of the industrial firm, institution, or service entity from which the wastes in question result.
4. **Type of Discharge** means sewage, industrial wastes or other wastes (*see Section 6111.01 (B), (C) and (D) R.C.*). Mixtures should be so indicated.
5. Identity of the body of water to which discharge is made should be named. The next larger tributary, generally known, also should be named.
6. Treatment insofar as this paragraph is concerned constitutes alteration of polluting constituents of wastes discharged by the reduction of their effect on the receiving waters of the state. If the answer is *Yes* to the question, supplementary information should be submitted to clearly establish the effectiveness of such treatment. If the answer is *No* supplementary information should describe any program of proposed improvements for pollution abatement (*see Item 7*).
7. Submission of relevant information should be attached and titled *Exhibit A* if no other descriptive title is given. Such supplemental data should set forth the number and location of outlets if more than one is involved; details of present and proposed volume and strength (*variability*) of discharge to be disposed; normalcy with respect to present production and resultant pollution loads; and such other information as may be pertinent to the control, prevention and abatement of pollution.

000846

SCM

September 21, 1966

To: Adams County
Adams County
Ind. Water-Dev.

Cable Tivola Corporation
P. O. Box 160
Adams, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Comments:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 26, 1953.

You will note that this permit expires September 1, 1967. Renewal of this permit is contingent upon compliance with the following conditions:

1. The satisfactory maintenance and operation of all facilities for the treatment and disposal of sanitary sewage and industrial wastes.

2. The submission to the Division of Engineering, Ohio Department of Health, at regular monthly intervals, of information regarding flow treatment analytical data on the industrial

3. The prompt reporting to the Division of Engineering of the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

4. The submission to the Division of Engineering of information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.

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Cal. [redacted] Division
Tit. [redacted]

-2-

September 21, 1966

5. The submission of a report indicating compliance with the Recommendations and Conclusions of the Lake Erie Conference, with special reference to Sections 12, 13, and 16.
6. The participation in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.4

Certified mail

cc: Health Commissioner
cc: District Office

000848

SCM

State of Ohio

Address Reply to:

G. A. HALL
Engineer-Secretary
450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
BARTON HOLL
SHARON D. BRESLER

Department of Health

Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1967

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 14, 1953.

You will note that this permit expires September 1, 1968. Renewal of this permit is contingent upon compliance with the following conditions:

1. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage.
2. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. Submit to and secure approval by the Ohio Department of Health by April 1, 1968, of detail plans of facilities for further reduction of the suspended solids in the effluent discharged.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

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Cabot Titania Corporation
Titanium Tetrachloride Unit

-2-

November 13, 1967

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Participate in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.10

Certified mail

cc: Health Commissioner
cc: District Office

000850

SCM

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.10

Date Issued - November 13, 1967

Expiration Date - September 1, 1968

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

SCM

000651

INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION
P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

August 6, 1968

SUBJECT: Water Pollution Control
 Permit Application

To: E. J. Holland

From: H. A. Kiskadden

Throughout the past year we have complied with the required sampling and analytical procedures for discharges into waters of the State. In addition to this we have monitored our effluents for upset conditions. When these conditions have occurred corrective action was taken as soon as possible. At times we have had to control our effluents, at extra expense, so that they would be compatible with other plants' discharges downstream of ours.

In the coming year we will continue to furnish data in compliance with the requirements as well as continuing our program of sampling routinely for the intermittent upset.

H. A. Kiskadden

HAK/pk

cc: GTC

SCM

000852

INTEROFFICE CORRESPONDENCE

CABOT TITANIA, INC.

PO. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

SUBJECT: **Water Pollution Control**

August 8, 1968

To: **B. J. Holland**

The effluent from the TiO_2 unit settling ponds is in good control. The ponds are scheduled for cleaning the week of August 12th. The sanitary sewage unit is being checked daily by production and by maintenance once a week.

The total plant effluent, ponds and storm sewer, is monitored for pH and during any upset is adjusted by adding soda ash.

The only area of any problem is in the storm sewers during a storm or from spillage that would go to the storm sewers. This problem is being looked into but may take some major changes in the sewer system. At present there have been two storm sewer drains tied into the chemical sewer.

Except for an infrequent upset or the first of a rain storm, the TiO_2 unit should meet the state requirements.

Ray Clark

RC/pk

SCM

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July 17, 1968

Cabot Titania Incorporated

Titanium Tetrachloride

Summary of Effluent - Monthly Reports

	<u>12/66 - 12/67</u>	<u>1/68 - 6/68</u>	
pH			
Average	3.97	5.72	6-9
Range	1.8 - 10.4	1.9 - 12.5	
Data Points	55	26	
Alkalinity (ppm CaCO ₃)			
Average	577	1230	
Range	120 - 1860	148 - 5800	
Data Points	12	11	
Chlorides (ppm)			
Average	1369	1305	<u>750</u>
Range	150 - 4595	488 - 2661	
Data Points	55	26	
Suspended Solids (ppm)			
Average	1211	1996	
Range	0.1 - 30,758	48 - 19,360	
Data Points	55	26	
Settleable Solids (ml/l)			
Average	34	87	0
Range	0.1 - 440	0.1 - 410	
Data Points	55	26	
Appearance	Turbid	Turbid	CLEAR
Odor	None	None	
Flow (MM Gallons)	~ 1.3	~ 1.3*	

Calculated from Meter Readings

000854

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INTER OFFICE CORRESPONDENCE
CABOT TITANIA CORPORATION
P.O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

SUBJECT: Waste Disposal - Water Pollution Control Permit (No. 1463)

August 8, 1968

To: E. J. Holland

Our programme of effluent monitoring and waste pond dredging should ensure a reasonable effluent from the $TiCl_4$ unit. As Harry Kiskadden points out, we have from time to time had to make extra efforts (at greatly increased cost) to ensure that our effluent was compatible with that of other plants. We will, of course, continue to do this.

With the advent of the recovery system on January 1st, 1969, excellent performance is to be expected from the clarifier system with only routine maintenance.

M. G. Fowler

MGF/pk

000855

SCM

WATER POLLUTION CONTROL BOARD
OHIO DEPARTMENT OF HEALTH
COLUMBUS, OHIO

RESOLUTION REGARDING AMENDED CRITERIA OF STREAM-WATER QUALITY
FOR VARIOUS USES ADOPTED BY THE BOARD ON OCTOBER 10, 1967

WHEREAS, Section 6111.03, of the Ohio Revised Code, provides, in part,
as follows:

"The water pollution control board shall have power:

(A) To develop programs for the prevention, control and
abatement of new or existing pollution of the waters of the
state; . . . " and

WHEREAS, Primary indicators of stream-water quality are needed as guides
for appraising the suitability of surface waters in Ohio for
various uses; and

WHEREAS, The stream-water quality criteria for various uses and
minimum conditions applicable to all waters adopted by the
Board on June 14, 1966, have been amended by the Ohio River
Valley Water Sanitation Commission;

THEREFORE BE IT RESOLVED, That the following amended stream-water
quality criteria for various uses, and minimum conditions
applicable to all waters, are hereby adopted in accordance
with amendments of the Ohio River Valley Water Sanitation
Commission.

MINIMUM CONDITIONS APPLICABLE TO
ALL WATERS AT ALL PLACES AND AT ALL TIMES

1. Free from substances attributable to municipal, industrial or other
discharges, or agricultural practices that will settle to form
putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials
attributable to municipal, industrial or other discharges, or agri-
cultural practices in amounts sufficient to be unsightly or
deleterious.
3. Free from materials attributable to municipal, industrial or other
discharges, or agricultural practices producing color, odor or
other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other
discharges, or agricultural practices in concentrations or combina-
tions which are toxic or harmful to human, animal, plant or aquatic
life.

000856

SCM

STREAM-QUALITY CRITERIA

FOR PUBLIC WATER SUPPLY

The following criteria are for evaluation of stream quality at the point at which water is withdrawn for treatment and distribution as a potable supply:

1. Bacteria: Coliform group not to exceed 5,000 per 100 ml as a monthly average value (either MPN or MF count); nor exceed this number in more than 20 percent of the samples examined during any month; nor exceed 20,000 per 100 ml in more than five percent of such samples.
2. Threshold-odor Number: Not to exceed 24 (at 60 deg. C.) as a daily average.
3. Dissolved solids: Not to exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time.
4. Radioactivity: Gross beta activity not to exceed 1,000 pCi/l, nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.
5. Chemical constituents: Not to exceed the following specified concentrations at any time:

<u>Constituent</u>	<u>Concentration (mg/l)</u>
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium (hexavalent)	0.05
Cyanide	0.025
Fluoride	1.0
Lead	0.05
Selenium	0.01
Silver	0.05

FOR INDUSTRIAL WATER SUPPLY

The following criteria are applicable to stream water at the point at which the water is withdrawn for use (either with or without treatment) for industrial cooling and processing:

1. Dissolved oxygen: Not less than 2.0 mg/l as a daily-average value, nor less than 1.0 mg/l at any time.
2. pH: Not less than 5.0 nor greater than 9.0 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Dissolved solids: Not to exceed 750 mg/l as a monthly average value, nor exceed 1,000 mg/l at any time.

000857

FOR AQUATIC LIFE A

The following criteria are for evaluation of conditions for the maintenance of a well-balanced, warm-water fish population. They are applicable at any point in the stream except for areas immediately adjacent to outfalls. In such areas cognizance will be given to opportunities for the admixture of waste effluents with stream water:

1. Dissolved oxygen: Not less than 5.0 mg/l during at least 16 hours of any 24-hour period, nor less than 3.0 mg/l at any time.
2. pH: No values below 5.0 nor above 9.0, and daily average (or median) values preferably between 6.5 and 8.5.
3. Temperature: Not to exceed 93 deg. F. at any time during the months of May through November, and not to exceed 73 deg. F. at any time during the months of December through April.
4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

FOR AQUATIC LIFE B

The following criteria are for evaluation of conditions for the maintenance of desirable biological growths and, in limited stretches of a stream, for permitting the passage of fish through the water, except for areas immediately adjacent to outfalls. In such areas cognizance will be given to opportunities for admixture of effluents with stream water:

1. Dissolved oxygen: Not less than 2.0 mg/l as a daily-average value, nor less than 1.0 mg/l at any time.
2. pH: Not less than 5.0 nor greater than 9.0 at any time.
3. Temperature: Not to exceed 95 deg. F. at any time.
4. Toxic substances: Not to exceed one-tenth of the 48-hour median tolerance limit, except that other limiting concentrations may be used in specific cases when justified on the basis of available evidence and approved by the appropriate regulatory agency.

FOR RECREATION

The following criterion is for evaluation of conditions at any point in waters designated to be used for recreational purposes, including such water-contact activities as swimming and water skiing:

Bacteria: Coliform group not to exceed 1,000 per 100 ml as a monthly average value (either MPN or MF count); nor exceed this number in more than 20 percent of the samples examined during any month; nor exceed 2,400 per 100 ml (MPN or MF count) on any day.

FOR AGRICULTURAL USE AND STOCK WATERING

The following criteria are applicable for the evaluation of stream quality at places where water is withdrawn for agricultural use or stock-watering purposes:

1. Free from substances attributable to municipal, industrial or other discharges, or agricultural practices that will settle to form putrescent or otherwise objectionable sludge deposits.
2. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges, or agricultural practices in amounts sufficient to be unsightly or deleterious.
3. Free from materials attributable to municipal, industrial or other discharges, or agricultural practices producing color, odor or other conditions in such degree as to create a nuisance.
4. Free from substances attributable to municipal, industrial or other discharges or agricultural practices in concentrations or combinations which are toxic or harmful to human, animal, plant or aquatic life.

STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address Reply to:

G. A. Hall
Engineer-Secretary
P. O. Box 118
Columbus, Ohio 43216

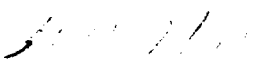
SPECIAL NOTICE
RENEWAL APPLICATION NECESSARY

Attention is called to the approaching expiration date of your permit for discharge to waters of the state. Renewal of permit is contingent upon compliance with conditions set forth in the letter accompanying the permit, a copy of which is attached.

Application for renewal of permit should be filed promptly. Two forms are enclosed, only one of which need be filed with the Board.

Under Item 7 of the form, explanation should be made concerning compliance with the conditions for renewal of the present permit. If for any reason the conditions have not been fulfilled, a complete explanation should be provided.

Enc.


G. A. Hall
Engineer-Secretary
Water Pollution Control Board

CC0860

SCM

**CABOT****CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

August 14, 1968

Mr. G. A. Hall
Engineer-Secretary
430 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Enclosed is our application for renewal of permit No. 1463 for the discharge of industrial wastes and sanitary sewage from our Titanium Tetrachloride unit into Fields Brook. We have complied with the provisions of the Water Pollution Control Act and with the conditions listed in Dr. Arnold's letter of November 13, 1967.

We have submitted, and secured approval of the Ohio Department of Health, the detailed plans of facilities for the reduction of suspended solids in the effluent from this unit. This approval was issued June 14th, 1967, effective February 1st, 1967. Since that time, we have used various treatments to secure the optimum operation of these facilities among them being a lime slurry treatment, a caustic neutralization treatment, and each of these combined with polyelectrolyte treatment. The best results were obtained from the caustic treatment and while a bit more expensive than the others, we intend to use it regularly in the future.

Yours very truly,

Cabot Titania Incorporated

E. J. Holland
Plant Manager

EJH/pk

000661

SCM

(Do Not Write in This Space)

Application No. _____

Date Received _____

(Do Not Write in This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

DEPARTMENT OF HEALTH

STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location State Rd. & Middle Road, Ashtabula, Ohio
3. Type of Establishment (If not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula, River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____
Title Plant Manager, Ashtabula Facilities
Post Office Address Cabot Titania Incorporated
P.O. Box 160, Ashtabula, Ohio 44004

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to on subscribed in my presence this 14th day of August, 1968,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer Patricia E. Kibbee
Official Title Notary Public, Ashtabula County, Ohio
My Commission Expires July 12, 1973

000862

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
SHARON D. BRESLER

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1968

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires July 1, 1969. Renewal of this permit is contingent upon compliance with the following conditions:

1. Continue the in-plant improvements to further reduce critical constituents in the plant effluent.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

SCM

000863

Cabot Titania Corporation
Titanium Tetrachloride Unit

-2-

November 13, 1968

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Submit to the Division of Engineering by March 1, 1969, a report regarding the quality of the plant effluent, with particular emphasis on meeting the requirements for industrial Water Quality Criteria as established by the Water Pollution Control Board's Resolution adopted October 10, 1967 (copy enclosed).

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.11

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000864

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.11

Date issued - November 13, 1968

Expiration Date - July 1, 1969

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

WPC

000565



CABOT TITANIA CORPORATION

P.O. BOX 160, ASHTABULA, OHIO 44004

April 10, 1969

**Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216**

Gentlemen:

In response to the requirements stated in condition No. 6 in your letter of November 13, 1968, we have made the following progress in reducing water pollution nuisances from the discharge of our Titanium Tetrachloride unit into Finner Creek:

In July 1967 a waste treatment system was completed. This system could not handle the dense solids suspended in the plant effluent stream. Repeated trial runs and modifications were being made almost constantly from July 1967 to January 1969, but in spite of these efforts, suspended solids in the effluent stream during this period of time varied between 0-6000 ppm.

We are presently making a process modification which will eliminate most of the dense solids from the effluent before it enters the waste treatment system. The entering effluent character is expected to be somewhat different from that for which the treatment system was designed, requiring that further research be made. This has now been completed. The results of this research have led to certain recommendations which will be implemented in June 1969. Clear, neutral effluent from the Titanium Tetrachloride unit is expected by June 1969.

Very truly yours,

**E. J. Holland
Plant Manager**

EJH/pk

Permit No. 1463

**bcc: FEDaley, CBeck, TWarren
IHH, FRM, MGF, JR, RC**

32M

000866

The logo for Cabot Corporation, featuring the word "CABOT" in a stylized font inside an oval.**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

May 8, 1969

Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Enclosed is our application for renewal of Permit No. 1463 for the discharge of industrial wastes and sanitary sewage from our Titanium Tetrachloride unit into Fields Brook. We have complied with the provisions of the Water Pollution Control Act and with the conditions listed in Dr. Arnold's letter of November 13, 1968 except that our report on the quality of plant effluent was submitted on April 10, 1969 instead of prior to March 1, 1969.

Yours very truly,

Edward J. Holland
Plant Manager

EJH/pk

SCM

000867

(Do Not Write In This Space)

Application No. _____
Date Received _____

(Do Not Write In This Space)

Permit No. _____
Date of Board Action _____

WATER POLLUTION CONTROL BOARD
DEPARTMENT OF HEALTH
STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location State Rd and Middle Rd. Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____
Title Plant Manager, Ashtabula Facilities
Post Office Address Cabot Titania Incorporated
P.O. Box 160 Ashtabula, Ohio 44004

VERIFICATION

Edward J. Holland, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant Edward J. Holland

Sworn to and subscribed in my presence this 6th day of May, 19 69,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer Patricia E. Kibbee
Official Title Notary Public, Ashtabula Cty. Ohio
My commission Expires July 12, 1973

000868

SCM

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1968

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires July 1, 1969. Renewal of this permit is contingent upon compliance with the following conditions:

1. Continue the in-plant improvements to further reduce critical constituents in the plant effluent.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

SCM

000869

**Cabot Corporation
Titanium Tetrachloride Unit**

-2-

November 13, 1968

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Submit to the Division of Engineering by March 1, 1969, a report regarding the quality of the plant effluent, with particular emphasis on meeting the requirements for industrial Water Quality Criteria as established by the Water Pollution Control Board's Resolution adopted October 10, 1967 (copy enclosed).

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.11

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000870

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
SHARON D. BRESLER

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1968

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires July 1, 1969. Renewal of this permit is contingent upon compliance with the following conditions:

1. Continue the in-plant improvements to further reduce critical constituents in the plant effluent.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

SCM

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Cabot Titania Corporation
Titanium Tetrachloride Unit

-2-

November 13, 1968

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Submit to the Division of Engineering by March 1, 1969, a report regarding the quality of the plant effluent, with particular emphasis on meeting the requirements for industrial Water Quality Criteria as established by the Water Pollution Control Board's Resolution adopted October 10, 1967 (copy enclosed).

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.11

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000872

**CABOT TITANIA CORPORATION**

P. O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

April 10, 1969

Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Gentlemen:

In response to the requirements stated in condition No. 6 in your letter of November 13, 1968, we have made the following progress in reducing water pollution nuisances from the discharge of our Titanium Tetrachloride unit into Fields Brook:

In July 1967 a waste treatment system was completed. This system could not handle the dense solids suspended in the plant effluent stream. Repeated trial runs and modifications were being made almost constantly from July 1967 to January 1969, but in spite of these efforts, suspended solids in the effluent stream during this period of time varied between 0-6000 ppm.

We are presently making a process modification which will eliminate most of the dense solids from the effluent before it enters the waste treatment system. The entering effluent character is expected to be somewhat different from that for which the treatment system was designed, requiring that further research be made. This has now been completed. The results of this research have led to certain recommendations which will be implemented in June 1969. Clear, neutral effluent from the Titanium Tetrachloride unit is expected by July 1st, 1969.

Very truly yours,

E. J. Holland
Plant Manager

EJH/pk

Permit No. 1463

bcc: FEDaley, CBeck, TWarren
IHH, FRM, MGF, JR, RC

SCM

C00873

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. C. Box 118
Columbus, Ohio 43218



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
ROBERT B. HOLT

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

October 15, 1969

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act of Ohio.

You will note that this permit expires July 1, 1970. Renewal of this permit is contingent upon compliance with the following conditions:

1. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
2. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
3. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
4. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.

SCM

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Cabot Titania, Inc.
Titanium Tetrachlorine Unit

-2-

October 15, 1969

5. Initiate promptly operating procedures to increase the efficiency of suspended solids removal facilities.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.12

Certified mail

cc: Health Commissioner
cc: District Office

SCM 000875

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.12

Date Issued - October 15, 1969

Expiration Date - July 1, 1970

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania, Inc.

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

SCM
928000

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN



CABOT TITANIA, INC.

P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-8801

May 11, 1970

Mr. G. A. Hall
Engineer Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Enclosed is our application for renewal of Permit No. 1463.12 for the discharge of industrial wastes and sanitary sewage from our Titanium Tetrachloride Unit into Fields Brook. We have complied with conditions as set forth in Dr. Arnold's letter of October 15, 1969.

With regard to condition number 5, we have continued our efforts to operate the effluent control system in a manner consistent with producing a clear effluent. We are still plagued with heavy solids problems. Several developmental approaches are under study to solve this problem. Specific actions underway include: addition of a two-stage neutralization system to assure proper pH control, rerouting of neutralizer supply lines to prevent short circuit of low pH material, and extensive testing of solids removal capabilities. This program is designed to produce clear effluent, except during pond cleaning activities, by the end of the summer of 1970, and to produce clear effluent all of the time by Spring of 1971.

Yours very truly,

Fred R. Mohrmann
Plant Manager

FRM/pk

SCM

000877

(Do Not Write In This Space)

Application No. _____
Date Received _____

(Do Not Write In This Space)

Permit No. _____
Date of Board Action _____

**WATER POLLUTION CONTROL BOARD
DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location State Road and Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1463.12).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____
Title Plant Manager
Post Office Address P. O. Box 160
Ashtabula, Ohio

VERIFICATION

Fred R. Mohrmann, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this 11th day of May, 19 70,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____
Official Title Notary Public, Ashtabula Cty, Ohio
Commission Expires 7/12/73

JAMES A. RHODES, Governor

State of Ohio

EMMETT W. ARNOLD, M.D.
Director of Health

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



PUBLIC HEALTH COUNCIL

Richard V. Brunner, D.D.S.

Chairman

J. Howard Holmes, M.D.

Vice Chairman

Ralph K. Ramsayer, M.D.

J. F. Mear, Ph.G.

Phillip T. Knies, M.D.

Lloyd E. Larrick, M.D.

J. Bruce Wenger, D.V.M.

Department of Health

Re: Cabot Titania, Inc., Titanium Tetrachloride Unit
Ashtabula
Industrial Wastes

July 13, 1970

Mr. Fred R. Mohrmann, Plant Manager
Cabot Titania, Inc.
Titanium Tetrachloride Unit
P.O. Box 160
Ashtabula, Ohio 44004

Dear Sir:

At the meeting held April 1, 1970, in Ashtabula, with representatives of the various companies discharging industrial wastewater into Field's Brook, Mr. J. E. Richards of the Ohio Department of Health, stressed the following points:

1. Although Field's Brook is not classified for specific uses, it is a water of the state and as such must conform to the water quality criteria that are applicable to all Waters of the State (the four freedoms).
2. The present effluents to Field's Brook are incompatible, sometimes grossly so, with maintaining the stream's required quality; with special emphasis on color, odor, suspended solids, pH, and possible toxicity.
3. The problem with pollution with Field's Brook is an old one, and none of the provisions the individual companies have taken in the past to solve it are adequate.
4. The state expects the companies to take immediate steps toward meeting the approved water quality standards.
5. A study of the feasibility of combined terminal treatment should be implemented at once, and completed as soon as possible.
6. Should combined terminal treatment prove infeasible plans for individual treatment processes that would produce acceptable effluents should be developed and submitted to the state for approval with all reasonable urgency.

Recent information obtained from Mr. M. G. Glenn of General Tire and Rubber indicated that in excess of three months will have elapsed since the April

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July 13, 1970

meeting and the time the contract is let for the feasibility studies on combined terminal treatment. It is also understood that the prospective consultants have estimated that the study may require as long as six months to complete. In the opinion of department personnel, this seems unduly long.

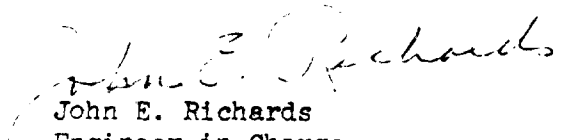
Because the matter of cleaning up Field's Brook is extremely urgent, it is requested that the companies submit by August 1, 1970, firm written commitments stating that they are participating in the feasibility study for combined terminal treatment.

It is urged that the companies do everything in their power to expedite these feasibility studies. It is the feeling of Ohio Department of Health personnel that the consultant should complete the studies by October 31. This does not seem to be unreasonable considering that much data on the quantity and composition of effluents and on Field's Brook itself is already available. It is also urged that the companies conduct, as parallel programs, feasibility studies on the individual treatment approach, so that when the results of the combined treatment studies are completed, comparisons and final judgements can be made without unnecessary delay. It is recognized that some companies are presently making such studies.

Recommendations by the Division of Engineering to the Water Pollution Control Board for your permit renewal are being withheld pending receipt of written confirmation from you that your company is participating in the study of combined terminal treatment.

If your company has any questions or comments concerning this letter, the Division of Engineering will be happy to answer or discuss them with you.

Yours very truly,


John E. Richards
Engineer-in-Charge
Sewage and Industrial Wastes Unit

JER:akf
cc Water Pollution Control Board

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The logo for Cabot, featuring the word "CABOT" in a stylized font inside a circle.

CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA

AREA CODE 216 997-5501

July 28, 1970

Mr. John E. Richards
Engineer in Charge
Sewage and Industrial Wastes Unit
Department of Health
P. O. Box 118
Columbus, Ohio 43216

Dear Sir:

I have been authorized to submit to you Cabot Titania Incorporated's confirmation that we will participate in the feasibility study for combined terminal treatment of effluents going into Fields Brook to be done by Catalytic Construction Company.

Cabot Titania Inc. has had an active program to improve the effluents from the Titanium Dioxide Unit and the Titanium Tetrachloride Unit in order to meet the "four freedoms". This has been done in the past and will continue while the feasibility study is being carried on so that when the feasibility study is complete, Cabot Titania Inc. will be able to weigh the advantages and disadvantages of terminal and individual treatment. Therefore, there is no further commitment beyond participating in the feasibility study.

As indicated in your letter, with our commitment in writing to participate in the study of combined terminal treatment, Cabot Titania Inc. expects the permit renewal will be effective retroactive to July 1, 1970 and will be for the period through June 30, 1971.

Yours very truly,

Fred R. Mohrmann
Plant Manager

SCM

FRM/pk

Permit: 1463 Titanium Tetrachloride Unit
1824 Titanium Dioxide Unit

000881

Rec'd 8/24/70

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
ROBERT B. HOLT

cc
FED
WFG
8/24/70

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

August 20, 1970

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Fred R. Mohrmann, Plant Manager

Gentlemen:

As a result of Board action August 11, 1970, enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act of Ohio.

You will note that this permit expires February 1, 1971. Renewal of this permit is contingent upon compliance with the following conditions:

1. Submit to the Division of Engineering a report presenting:
 - (a) The findings of the feasibility study on combined terminal treatment of industrial wastes as related to the existing plant;
 - (b) A decision to proceed or not to proceed with the combined treatment approach;
 - (c) If the decision is to proceed, the anticipated schedule for full implementation of the plan.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.

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Cabot Titania, Inc.
Titanium Tetrachlorine Unit

-2-

August 20, 1970

4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Participate in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should your company decide against combined terminal treatment, detail plans for separate treatment will be required with all due haste.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.13

Certified mail

cc: Health Commissioner
cc: District Office

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STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.13

Date Issued - August 20, 1970

Expiration Date - February 1, 1971

WATER POLLUTION CONTROL BOARD

COLUMBUS

This certifies that

Cabot Titania, Inc.

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

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CABOT

CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

July 28, 1970

Mr. John E. Richards
Engineer in Charge
Sewage and Industrial Wastes Unit
Department of Health
P. O. Box 118
Columbus, Ohio 43216

Dear Sir:

I have been authorized to submit to you Cabot Titania Incorporated's confirmation that we will participate in the feasibility study for combined terminal treatment of effluents going into Fields Brook to be done by Catalytic Construction Company.

Cabot Titania Inc. has had an active program to improve the effluents from the Titanium Dioxide Unit and the Titanium Tetrachloride Unit in order to meet the "four freedoms". This has been done in the past and will continue while the feasibility study is being carried on so that when the feasibility study is complete, Cabot Titania Inc. will be able to weigh the advantages and disadvantages of terminal and individual treatment. Therefore, there is no further commitment beyond participating in the feasibility study.

As indicated in your letter, with our commitment in writing to participate in the study of combined terminal treatment, Cabot Titania Inc. expects the permit renewal will be effective retroactive to July 1, 1970 and will be for the period through June 30, 1971.

Yours very truly,

Fred R. Mohrmann
Plant Manager

SCM

FRM/pk

Permit: 1463 Titanium Tetrachloride Unit
1824 Titanium Dioxide Unit

000881

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
ROBERT B. HOLT

Department of Health Water Pollution Control Board

cc
FED
WFG
8/20/70

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

August 20, 1970

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Fred R. Mohrmann, Plant Manager

Gentlemen:

As a result of Board action August 11, 1970, enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Tetrachloride Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act of Ohio.

You will note that this permit expires February 1, 1971. Renewal of this permit is contingent upon compliance with the following conditions:

1. Submit to the Division of Engineering a report presenting:
 - (a) The findings of the feasibility study on combined terminal treatment of industrial wastes as related to the existing plant;
 - (b) A decision to proceed or not to proceed with the combined treatment approach;
 - (c) If the decision is to proceed, the anticipated schedule for full implementation of the plan.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.

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Cabot Titania, Inc.
Titanium Tetrachlorine Unit

-2-

August 20, 1970

4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Participate in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should your company decide against combined terminal treatment, detail plans for separate treatment will be required with all due haste.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1463.13

Certified mail

cc: Health Commissioner
cc: District Office

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STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1463.13

Date Issued - August 20, 1970

Expiration Date - February 1, 1971

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania, Inc.

Titanium Tetrachloride Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
GREAT LAKES REGION
LAKE ERIE PROGRAM OFFICE
21929 LORAIN ROAD
CLEVELAND, OHIO 44126

September 23, 1970

Mr. Fred Mohrman
Plant Manager
Cabot Titania Corporation
Titanium Tetrachloride &
Titanium Dioxide Plants
Ashtabula, Ohio 44004

Dear Mr.

Attached for your review is a copy of a report summarizing our recent joint State-Federal inspection of your plant. I would appreciate your corrections and/or comments on this report by October 5.

Copies of the report are also being sent to the Ohio Department of Health for their review.

Corrections and comments will be incorporated into the report where necessary and final copies will be sent to you, the Ohio Department of Health, and our Regional Office in Chicago.

Although not discussed in the attached report, it appears that the industries in the Ashtabula complex have a discharge high in dissolved solids. It should be noted that there is some concern in dissolved solids build-up and this problem should not be neglected.

During discussions with individual industries in the Ashtabula area, it is apparent that there is some confusion in what analysis should be performed for determining suspended solids. By suspended solids, we mean total solids minus total dissolved solids, and should be tested by procedures indicated in Standard Methods.

I would like to thank you for your cooperation during the inspection of your plant.

Sincerely yours,

George L. Harlow

George L. Harlow
Director

Attachment

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9/28/70*

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CABOT TITANIA CORP.
TITANIUM TETRACHLORIDE PLANT
&
TITANIUM DIOXIDE PLANT
ASHTABULA, OHIO

GENERAL

Meeting - 8-10-70

In Attendance - Cabot Titania - Fred Mohrman
Irwin Hess

Ohio Dept. of - James Shea
Health

FWQA - George Harlow
Edward Kramer

Cabot Titania Corporation, Titanium Tetrachloride Plant produces titanium tetrachloride most of which is sent to the Cabot Titania, Titanium Dioxide Plant. Some titanium tetrachloride is also sold to another industry in the area.

The wastes from the Tetrachloride Plant are discharged through two outfalls to Fields Brook while the Dioxide Plant has one outfall to Fields Brook.

The monthly report submitted to the Ohio Department of Health includes the following analyses based on a composite sample of both effluents proportioned by flow:

Flow
pH
Alkalinity
Total Solids
Total Suspended Solids
Chlorides
Appearance
Odor

TITANIUM TETRACHLORIDE PLANT

TREATMENT FACILITIES

The waste stream flows through two automatic pH adjustors (lime) and then to a flocculator (using polymer). The overflow from the flocculator (approximately 400 gpm) flows to a settling pond which discharges to a ditch then to Fields Brook. The solids and under-

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flow from the flocculator go to vacuum filters. However, the filters do not have the capacity to handle the total flow so a portion (approximately 100 gpm) bypass the filters and go to a series of two settling ponds. The pond effluent is the second discharge to Fields Brook.

The filtrate from the vacuum filters is recycled back to the flocculator and the filter cake is disposed of in a field.

The ponds that receive the flow bypassing the vacuum filters need dredging approximately every month or two. The dredging and disposal are carried out by the Kosky operations. During dredging there is an upset and excessive solids spill over creating high suspended solids concentrations in effluent.

IMPROVEMENTS SINCE ESTABLISHMENT OF LAKE ERIE ENFORCEMENT CONFERENCE IMPLEMENTATION SCHEDULES

The schedule established at the March 22, 1967 Lake Erie Enforcement Conference indicated completion of plans by 1-67 and completion of construction by 6-1-67 for additional facilities for reduction of solids. The recent status report of June 1970 indicated completed facilities with additional treatment necessary. The report also indicated that industries in Ashtabula complex are investigating joint treatment of wastes.

The flocculator and filter system were installed in 1967 but settling was poor. In 1968-1969, major in-plant controls were completed to reduce solids to treatment facility. Two automatic pH adjusters were also installed.

PROPOSED IMPROVEMENTS

Research project is presently under investigation by Cabot Titania personnel which would result in recirculation of a waste flow. It is anticipated that the recycling will be completed by the end of spring, 1971, and that the flow discharged to Fields Brook will be reduced from 30-60%.

Cabot Titania Corp. is participating in the feasibility study to be prepared by Catalytic Construction on the joint treatment of all industrial waste presently discharged to Fields Brook. This report will supposedly indicate to the seven industries (presently discharging to Fields Brook) what the best method for treating their wastes will be in terms of a new joint treatment facility, treatment at the Ashtabula STP or individual in-plant treatment. The report is to be ready three months after receiving notice to proceed. Presently, no notice has been seen although on 8-5-70 Catalytic Construction was told they would be hired. Presently,

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contracts are being drawn up for the seven industries involved. It is hoped that letters of intent can be drafted and work can start before contracts are completed.

The ODH has issued permits to all seven industries to February 1, 1971 with conditions of completing the feasibility study and making decisions as to treatment process.

FWQA indicated that this joint treatment facility appears to be a long way off and improvements to present treatment facilities may be necessary in the interim.

TREATMENT NEEDS

At time of inspection, it appeared that the main problems with Cabot Titanium Tetrachloride effluent are those associated with the solids upsetting when retention ponds are dredged out. Since dredging is required frequently, a program should be instituted immediately to eliminate the upsetting of retention ponds which result in overflow of suspended solids.

In addition, the conditions of the permit issued by the Ohio Department of Health should be complied with and any necessary improvements should be made without delay.

Because the data reported to the Ohio Health Department are a composite of two outfalls, it is impossible to evaluate the data in terms of treatment needs for each outfall. Since data does not reflect the effectiveness of each treatment process, it is suggested that composite samples be made and analyzed for each outfall separately with results in terms of concentration and corresponding flow submitted as monthly reports to the Ohio Health Department.

Work on recycling system should continue and should not be delayed by joint feasibility study.

RECOMMENDATIONS FOR STATE-FEDERAL ACTION

It is recommended that establishment of treatment needs and corresponding schedules be reviewed in February and action by Cabot to implement a program for any needed improvements be assessed.

It is also recommended that another visit be made to the Titanium Tetrachloride Plant to assess the improvements made by the completion of the recirculation system and any additional improvements such as eliminating excessive solids discharge during dredging of ponds.

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TITANIUM DIOXIDE PLANT

TREATMENT FACILITIES

The process waste water flows into two ponds in parallel. Flocculants are added before the ponds. The effluent of the ponds recombine and flow through two more ponds in series.

A clean water discharge (cooling water, etc.) bypasses the ponds, combines with the effluent from the ponds and discharges to Fields Brook. The combined discharge averages from 600-800 gpm of which approximately 200-300 gpm is from the process wastes ponds. Solids in ponds are dredged out and are disposed of by Kosky.

IMPROVEMENTS SINCE ESTABLISHMENT OF LAKE ERIE ENFORCEMENT CONFERENCE IMPLEMENTATION SCHEDULES

The schedule established at the March 22, 1967 Lake Erie Enforcement Conference indicated that additional facilities for reduction of solids were installed on 9-1-66. The recent FWQA status report of June 1970 indicated completed facilities with additional treatment necessary. The report also indicated that industries in Ashtabula complex are investigating joint treatment of wastes.

Since the Conference, the following accomplishments were completed by Cabot:

1. Removal of some process waste water that was going to clean water stream and re-routing these wastes to the ponds;
2. new baffles installed in ponds;
3. addition of flocculants (started in May 1970);
4. installation of a second pump for process waste flow to ponds which eliminated overflow to clean water sewer (complete around June 1970); and,
5. installation of trench to make all ponds in parallel so that ponds will not have to be shut off during dredging (at time of inspection, the trench was near completion and should be completed sometime in September).

PROPOSED IMPROVEMENTS

Completion of trench will enable the waste ponds to be used in series or parallel. This will eliminate upset of ponds during the dredging out of solids. Completion expected before the end of September.

Cabot Titania Corp. is participating in the feasibility study to be prepared by Catalytic Construction on joint treatment of all industrial waste presently discharged to Fields Brook. This report will supposedly indicate to the seven industries (presently discharging to Fields Brook) what the best method for treating their waste will be in terms of a new joint treatment facility, treatment at the Ashtabula STP or individual in-plant treatment. The report is to be ready three months after receiving notice to proceed. Presently, no notice has been sent although on 8-5-70 Catalytic Construction was told they will be hired. Presently, contracts are being drawn up for the seven industries involved. It is hoped that letters of intent can be drafted and work can start before contracts are completed.

The ODH has issued permits to all seven industries to February 1, 1971 with conditions of completing the feasibility study and making decisions as to treatment process.

FWQA indicated that this joint treatment facility appears to be a long way off and improvements to present treatment facilities may be necessary in the interim.

TREATMENT NEEDS

At the time of inspection, it appeared that the effluent from the ponds was of good quality and that completion of trench would provide adequate treatment of process wastes. However, the conditions of the permit issued by the ODH should be complied with and any necessary improvements should be made without delay.

A study should be made to determine the quality of waste water in the clean water sewer and the necessity for treatment of these wastes.

RECOMMENDATIONS FOR STATE-FEDERAL ACTION

It is recommended that establishment of treatment needs and corresponding schedules be reviewed in February and another visit be made, if necessary, to assess the adequacy of completed treatment facilities.

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STATE OF OHIO
DEPARTMENT OF HEALTH
WATER POLLUTION CONTROL BOARD

Address reply to:

G. A. Hall
Engineer-Secretary
P. O. Box 118
Columbus, Ohio 43216

SPECIAL NOTICE

RENEWAL APPLICATION NECESSARY

Attention is called to the approaching expiration date of your permit for discharge to waters of the state. Renewal of permit is contingent upon compliance with conditions set forth in the letter accompanying the permit, a copy of which is attached.

Application for renewal of permit should be filed promptly. Two forms are enclosed, only one of which need be filed with the Board.

Under Item 7 of the form, explanation should be made concerning compliance with the conditions for renewal of the present permit. If for any reason the conditions have not been fulfilled a complete explanation should be provided.

G. A. Hall
Engineer-Secretary
Water Pollution Control Board

Enc.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
GREAT LAKES REGION
LAKE ERIE PROGRAM OFFICE
21929 LORAIN ROAD
CLEVELAND, OHIO 44126

October 27, 1970

Mr. Fred Mohrman
Cabot Titania Corp.
Titanium Dioxide Plant &
Titanium Tetrachloride Plant
Ashtabula, Ohio

Dear Mr. Mohrman:

On September 23, we sent to you a summary report of our visit to your plant and a letter requesting your comments by October 5, 1970.

To date we have not received any comments. I am attaching another copy of the past correspondence for your review. If we do not receive any notice as to comments on this report by November 6, we will assume the report is acceptable and that you have no comments.

If your comments are sent in the interim, please disregard this letter.

Sincerely yours,

George L. Harlow
Director

Attachment

000892

SCM



CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

December 30, 1970

Mr. G. A. Hall
Engineer Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Enclosed is our application for renewal of Permit No. 1463.12 for the discharge of industrial wastes and sanitary sewage from our Titanium Tetrachloride Unit into Fields Brook.

We have complied with Conditions No. 2 through 4, and No. 6 as set forth in Dr. Arnold's letter of August 20, 1970. With respect to Condition No. 5, we have continued our efforts to operate the effluent control system in a manner consistent with producing a clear effluent. Pilot plant developmental studies are continuing and the results of these studies are expected during January 1971.

Because the feasibility study on the combined terminal treatment facility is not expected to be complete until January 31, 1971, we have not complied with Condition No. 1. We intend to do so as soon as the results of the study are made available to us and a comparison between joint and individual treatment is made.

Very truly yours,

Fred R. Mohrmann
Plant Manager

FRM/pk

SCM

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(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

WATER POLLUTION CONTROL BOARD

**DEPARTMENT OF HEALTH
STATE OF OHIO**

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location State Road and Middle Road, Ashtabula, Ohio
3. Type of Establishment (If not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit (No. 1463.13).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board. Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____

Title Plant Manager

Post Office Address P.O. Box 160

Ashtabula, Ohio 44004

VERIFICATION

Fred R. Mohrmann, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to on subscribed in my presence this _____ day of _____, 19____,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____

Official Title Notary Public, Ashtabula Cty, Ohio

Commission Expires 7/12/73

SCM

000856

MES A. RHODES, Governor

State of Ohio

EMMETT W. ARNOLD, M.D.
Director of Health

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



PUBLIC HEALTH COUNCIL

J. Howard Holmes, M.D.
Chairman
Ralph K. Ramsayer, M.D.
Vice Chairman
J. F. Mear, Ph.G.
Phillip T. Knies, M.D.
Lloyd E. Larrick, M.D.
J. Bruce Wenger, D.V.M.
Richard V. Brunner, D.D.S.

Department of Health

December 29, 1970

Re: Cabot Titania Corporation
Ashtabula (Permit 1824) (Permit 1463)

Cabot Titania Corporation
Post Office Box 160
Ashtabula, Ohio 44004

Attention: Mr. F. R. Mohrmann, Plant Manager

Gentlemen:

By now you will have received a reminder from Mr. G. A. Hall, Secretary to the Water Pollution Control Board, that your current permits will expire February 1, 1971, and that applications for renewal should be submitted by January 1, 1971.

The Division of Engineering may defer action on these applications until after a meeting with company representatives. This meeting will be held in Columbus sometime in the latter half of February or very early March. It is understood that Catalytic Inc. will submit final report to each of the companies by January 31, 1971. The precise date of the meeting will be decided after the report is submitted. The date will be set to allow the companies three or four weeks to digest the reports and determine course of action, and, at the same time, to allow action by the Board on March 9, 1971.

It is expected that at the meeting between company representatives and Division of Engineering personnel in Columbus, the status of the joint terminal treatment development work will be reviewed and discussed. It is also expected that each of the companies will submit a statement announcing whether it will adopt the joint terminal treatment approach or provide individual waste treatment facilities. Such statements, along with other information accompanying the permit applications will form the basis for recommendations the Division of Engineering will make to the Water Pollution Control Board.

If the decision is to proceed with joint terminal treatment, appropriate schedules for the submission of plans and completion of construction will be settled upon and recommended to the Board. If the joint treatment is decided against, the Division of Engineering will recommend, as a permit condition, that detail plans for adequate individual treatment facilities be submitted by June 1, 1971.

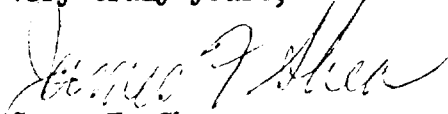
CC
FELD
1HH
WFG
1/4/71

SCM

000893

If companies are unable to arrive at firm decisions, the Division of Engineering will have no other recourse than to recommend their appearance before the Board to show cause why applications should be approved.

Very truly yours,



James F. Shea
Engineer
Industrial Waste Section

JFS:mj

cc: Water Pollution Control Board
cc: Adam L. Wesner
cc: Don Seeds

000694

SCM



CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-5501

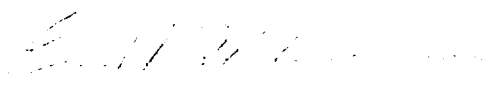
March 30, 1971

Mr. George H. Eagle
Chief Engineer
Ohio Department of Health
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Eagle:

In reference to renewal permits for our Titanium Tetrachloride Unit (No. 1463) and our Titanium Dioxide Unit (No. 1824) pertaining to condition Number 1, for the permit renewal, Cabot Titania has made the decision not to proceed with the combined treatment approach but has elected to approach it on an individual basis.

Very truly yours,


Fred R. Mohrmann
Plant Manager

FRM/pk

cc: Mr. G. A. Hall
Engineer Secretary

000897

SCM

JOHN J. GILLIGAN, Governor

State of Ohio



450 East Town Street
P.O. Box 118
Columbus, Ohio 43216

Department of Health

NOTICE

March 22, 1971

Enclosed is a copy of the "Resolution Adopted By The Ohio Water Pollution Control Board, February 9, 1971, Regarding Discharge Of Toxins To Waters Of The State".

You are directed to advise this office by June 1, 1971, as to your compliance with this resolution and to the requirements set forth in the "Safeguards For Toxins" which is a part of the resolution".

George H. Eagle
Chief Engineer

Enclosure

RESOLUTION ADOPTED BY THE OHIO WATER POLLUTION CONTROL BOARD
FEBRUARY 9, 1971, REGARDING DISCHARGE OF TOXINS
TO THE WATERS OF THE STATE

WHEREAS, Section 6111.01 of the Ohio Revised Code, states, in part as follows:

"(A) 'Pollution' means the placing of any noxious or deleterious substances in any waters of the state or affecting the properties of any waters of the state in a manner which renders such waters harmful or inimical to the public health, or to animal or aquatic life, or to the use of such waters for domestic water supply, or industrial or agricultural purposes, or for recreation."

WHEREAS, An increasing number of materials containing toxic constituents (such materials or constituents are referred to herein as "toxins") are being used in or result from various industrial, commercial and agricultural operations; and

WHEREAS, An increasing number of discharges of said toxins to the waters of the state in violation of section 6111.01 et seq. of the Ohio Revised Code and the Stream-Water Quality Standards adopted by the Board, has come to the attention of various state agencies;

THEREFORE BE IT RESOLVED, That persons who use or whose operations produce toxins shall forthwith eliminate the conceivable possibilities of discharges of said toxins into the waters of the state, including those of an accidental nature;

AND BE IT FURTHER RESOLVED, That the staff of the Ohio Department of Health is hereby directed to distribute to all persons who may use or whose operations may produce toxins this resolution and the "Safeguards for Toxins," a copy of which is attached and made a part of this resolution;

AND BE IT FURTHER RESOLVED, That request will be made to the Attorney General for the prosecution under sections 6111.04, 6111.07 and 6111.99 of the Ohio Revised Code of any person who pollutes the waters of the state who has not complied with this resolution and the requirements set forth in the "Safeguards for Toxins," and said "Safeguards for Toxins" shall be made a condition of each permit issued by the Board hereafter; compliance with this resolution and the "Safeguards for Toxins" is not a defense to any action brought pursuant to law or equity.

SAFEGUARDS FOR TOXINS

1. Survey all chemicals handled or used in industrial, commercial, agricultural and related operations as to their toxicity and furnish the Ohio Department of Health, Division of Engineering, with a list of all chemicals and materials which are toxic. The list shall include the trade name, the generic name of the toxicant and the supplier of the material.
2. Where possible, substitute non-toxic materials.
3. Maintain consistent and permanent labels on all portions of toxins kept on the premises.
4. Institute an educational program to insure that all personnel handling toxins are cognizant of their hazards.
5. Where toxins are used in or result from the processes, install fail-safe provisions to prevent the release of any toxins which may cause pollution.
6. Work with the manufacturers of the toxins to develop means of detection and alarm (notification) of any release of said toxins.
7. Construct emergency holding facilities to prevent discharge of wastewater which may be accidentally contaminated with toxins.

JOHN J. GILLIGAN, Governor

State of Ohio



450 East Town Street
P.O. Box 118
Columbus, Ohio 43216

Department of Health

BGOConnell
cc: FEDaley
WFGreeley
CBeck
RLincecum
IHess

4/13/71

April 12, 1971

Mr. F. R. Mohrmann, Plant Manager
Cabot Titania Corporation
P.O. Box 160
Ashtabula, Ohio 44004

Dear Sir:

As you know, action by the Division of Engineering on your company's application for permit renewal has been deferred for several months, pending the completion of the Catalytic, Inc. studies on the joint terminal treatment approach. Since this approach has now been decided against, the alternative, an individual treatment process which will produce an acceptable effluent, must be developed and placed in operation as soon as possible.

Your company's application for permit renewal will be considered by the Water Pollution Control Board, hopefully, in the May, 1971 meetings. Permit conditions that the Division of Engineering will recommend to the Board, include the following.

1. Submission by June 1, 1971, of detail plans and/or procedures that will enable your plant to produce, consistently, waste effluent compatible with Ohio Water Quality Standards.
2. Submission, by July 1, 1971, of proposed schedule for completion and implementation of the required facilities and/or procedures.
3. Place under construction prior to September 1, 1971 the facilities called for in detail plans.
4. An expiration date of October 1, 1971, by which time your company's schedules can be reviewed, thoroughly discussed, and modified, where necessary.

Recommendations by the Division of Engineering to the Board for the subsequent permit (after October 1, 1971) will cover a firm and realistic schedule for completing the construction of facilities and placing the waste treatment process in operation.

SCM

000901

Page two
April 12, 1971

The Division of Engineering wishes to emphasize that the effluent from your plant's new facility must be completely and consistently compatible with the pertinent criteria. These pertinent criteria are contained in "Resolution Establishing Amended Criteria of Stream Water Quality" adopted by the Board on April 14, 1970.

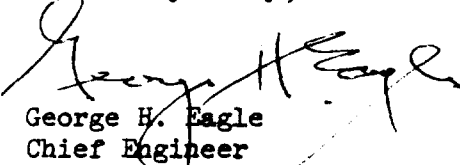
1. Minimum Conditions Applicable To All Waters At All Places And At All Times (page 2).
2. In addition the pH, dissolved oxygen, dissolved solids and temperature of Fields Brook must be maintained at levels specified for industrial waters (page 4).

Satisfactory compliance with these criteria will demand some form of continuous monitoring of the final effluent. To the extent possible, the Division of Engineering will exercise reasonableness in recommending schedules to the Board, in recognition of the fact that what is now wanted is a fully adequate, consistent and reliable waste treatment process, with ample safety factors designed into it.

Due to critical and long standing problems in Fields Brook no undue delay in construction of corrective measures can be tolerated. It is urged, for example, that if long-term-delivery items of equipment will be required in the proposed process, these should be placed on order as soon as possible. Delays in schedules based on purely economic factors would also be difficult to defend.

In summary, your company is being directed to make the cleaning up of Fields Brook a high-priority project; and to act immediately and diligently to accomplish this.

Yours very truly,



George H. Eagle
Chief Engineer

cc: Water Pollution Control Board
cc: Northeast District Office

C00302

**CABOT TITANIA, INC.**

P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAK" ASHTABULA
AREA CODE 216 997-8801

May 11, 1970

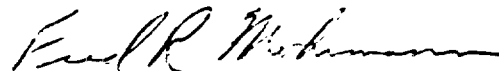
Mr. G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Our application for renewal of Permit No. 1824.7 for the discharge of industrial wastes and sanitary sewage from the Titanium Dioxide Unit is attached. We have complied with the first four conditions of Dr. Arnold's letter of October 15, 1969. The last two conditions were concerned with the construction of additional settling facilities. This work has not been necessary due to finding a much more efficient flocculant. The use of this material has greatly reduced the suspended solids in our effluent.

In order to utilize the full effectiveness of this new flocculant, modifications are being made to the existing ponds. These include parallel operation, new baffles, and effluent skimmers in all ponds. In addition, a spare pump (automatically energized) is being installed in the chemical sump. This will prevent overflow of untreated chemical wastes which can occur due to failure of the existing pump. All of the above modifications are scheduled for completion by July 1, 1970. Some delay may occur as a result of the truckers and building trades union strikes, but this is anticipated to be a few weeks at most.

Very truly yours,



Fred R. Mohrmann
Plant Manager

FRM/pk

SCM

000753

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. C. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
ROBERT B. HOLT

Department of Health Water Pollution Control Board

cc
FED
WFG
8/24/70

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

August 20, 1970

Cabot Titania, Inc.
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Fred R. Mohrmann, Plant Manager

Gentlemen:

As a result of Board action August 11, 1970, enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act of Ohio.

You will note that this permit expires February 1, 1971. Renewal of this permit is contingent upon compliance with the following conditions:

1. Submit to the Division of Engineering a report presenting:
 - (a) The findings of the feasibility study on combined terminal treatment of industrial wastes as related to the existing plant;
 - (b) A decision to proceed or not to proceed with the combined treatment approach;
 - (c) If the decision is to proceed, the anticipated schedule for full implementation of the plan.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.

SCM

000754

Cabot Titania, Inc.
Titanium Dioxide Unit

-2-

August 20, 1970

4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.
5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Participate in the joint industrial sampling and analysis program, with the submission to the Division of Engineering of reports and an over-all evaluation by the joint committee.

Should your company decide against combined terminal treatment, detail plans for separate treatment will be required with all due haste.

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.3

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000755

STATE OF OHIO

DEPARTMENT



OF HEALTH

Permit No. 1824.8

Date Issued - August 20, 1970

Expiration Date - February 1, 1971

WATER POLLUTION CONTROL BOARD
COLUMBUS

This certifies that

Cabot Titania, Inc.

Titanium Dioxide Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

000756

SCM



UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
GREAT LAKES REGION
LAKE ERE PROGRAM OFFICE
21929 LORAIN ROAD
CLEVELAND, OHIO 44126

September 23, 1970

Mr. Fred Mohrman
Plant Manager
Cabot Titanis Corporation
Titanium Tetrachloride &
Titanium Dioxide Plants
Ashtabula, Ohio 44004

Dear Mr.

Attached for your review is a copy of a report summarizing our recent joint State-Federal inspection of your plant. I would appreciate your corrections and/or comments on this report by October 5.

Copies of the report are also being sent to the Ohio Department of Health for their review.

Corrections and comments will be incorporated into the report where necessary and final copies will be sent to you, the Ohio Department of Health, and our Regional Office in Chicago.

Although not discussed in the attached report, it appears that the industries in the Ashtabula complex have a discharge high in dissolved solids. It should be noted that there is some concern in dissolved solids build-up and this problem should not be neglected.

During discussions with individual industries in the Ashtabula area, it is apparent that there is some confusion in what analysis should be performed for determining suspended solids. By suspended solids, we mean total solids minus total dissolved solids, and should be tested by procedures indicated in Standard Methods.

I would like to thank you for your cooperation during the inspection of your plant.

Sincerely yours,

George L. Harlow

George L. Harlow
Director

Attachment

000757

SCM

*CO
FED
WFG
INN
BOC
RC
LH
9/24/70*

*See file
for file*



UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
GREAT LAKES REGION
LAKE ERIE PROGRAM OFFICE
21929 LORAIN ROAD
CLEVELAND, OHIO 44126

Handwritten notes:
10/27/70
Q1
5/14/71
P. J. [unclear]
[unclear]

October 27, 1970

Mr. Fred Mohrman
Cabot Titania Corp.
Titanium Dioxide Plant &
Titanium Tetrachloride Plant
Ashtabula, Ohio

Dear Mr. Mohrman:

On September 23, we sent to you a summary report of our visit to your plant and a letter requesting your comments by October 5, 1970.

To date we have not received any comments. I am attaching another copy of the past correspondence for your review. If we do not receive any notice as to comments on this report by November 6, we will assume the report is acceptable and that you have no comments.

If your comments are sent in the interim, please disregard this letter.

Sincerely yours,

George L. Harlow

George L. Harlow
Director

Attachment

000758

SCM

INTEROFFICE CORRESPONDENCE

CABOT TITANIA, INC.

P. O. BOX 160, ASHTABULA, OHIO 44004

IN REPLY TO YOUR LETTER OF

December 15, 1970

SUBJECT: Permit Renewal for Effluent Discharge - Oxide Plant


To: F. R. Mohrmann

From: H. P. Cassidy

Regarding application for renewal of our present permit for discharge of industrial wastes and sanitary sewage from the Titanium Dioxide Unit, we are in compliance with Condition 2 through 6 outlined in Dr. Arnold's letter of 8/20/70. Under Condition 1 concerning the joint feasibility study which is now in progress, completion by Catalytic is not scheduled until year's end. A recommendation to proceed or not to proceed with the combined treatment approach will be made after we have fully evaluated Catalytic's report. Also, the anticipated schedule for full implementation of the plan if we decide to proceed would be made after evaluation of the report.

In August we completed all of the modifications to the settling ponds and have installed the spare pump at the Chemical sump as outlined in your letter to Mr. G. A. Hall of 5/11/70. We therefore have complied with all of the conditions for renewal of the existing permit as outlined in Dr. Arnold's letter of 10/15/69. This also complies with the "Proposed Improvements" item outlined in the report by G. L. Harlow, of the F.W.P.C.A., dated 10/27/70.

In this same report under the item "Treatment Needs" as a result of our studies, we have scheduled additional modifications to reroute the storm sewer in the area of the large slurry storage tanks from the clean water sewer to the settling ponds instead. This will further safeguard against possible contamination by suspended solids.


H. P. Cassidy

HPC/pk

cc: IHH
BGOC
RC

000759

SCM

JAMES A. RHODES, Governor

State of Ohio

PUBLIC HEALTH COUNCIL

J. Howard Holmes, M.D.
Chairman
Ralph K. Ramsayer, M.D.
Vice Chairman
J. F. Mear, Ph.G.
Phillip T. Knies, M.D.
Lloyd E. Larrick, M.D.
J. Bruce Wenger, D.V.M.
Richard V. Brunner, D.D.S.

EMMETT W. ARNOLD, M.D.
Director of Health

450 East Town Street
P.O. Box 118
Columbus, Ohio 43216



Department of Health

December 29, 1970

Re: Cabot Titania Corporation
Ashtabula (Permit 1824) (Permit 1463)

Cabot Titania Corporation
Post Office Box 160
Ashtabula, Ohio 44004

Attention: Mr. F. R. Mohrmann, Plant Manager

Gentlemen:

By now you will have received a reminder from Mr. G. A. Hall, Secretary to the Water Pollution Control Board, that your current permits will expire February 1, 1971, and that applications for renewal should be submitted by January 1, 1971.

The Division of Engineering may defer action on these applications until after a meeting with company representatives. This meeting will be held in Columbus sometime in the latter half of February or very early March. It is understood that Catalytic Inc. will submit final report to each of the companies by January 31, 1971. The precise date of the meeting will be decided after the report is submitted. The date will be set to allow the companies three or four weeks to digest the reports and determine course of action, and, at the same time, to allow action by the Board on March 9, 1971.

It is expected that at the meeting between company representatives and Division of Engineering personnel in Columbus, the status of the joint terminal treatment development work will be reviewed and discussed. It is also expected that each of the companies will submit a statement announcing whether it will adopt the joint terminal treatment approach or provide individual waste treatment facilities. Such statements, along with other information accompanying the permit applications will form the basis for recommendations the Division of Engineering will make to the Water Pollution Control Board.

If the decision is to proceed with joint terminal treatment, appropriate schedules for the submission of plans and completion of construction will be settled upon and recommended to the Board. If the joint treatment is decided against, the Division of Engineering will recommend, as a permit condition, that detail plans for adequate individual treatment facilities be submitted by June 1, 1971.

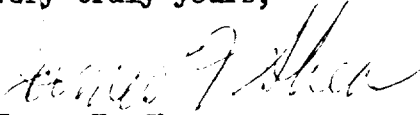
CC
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WFG
1/1

SCM

000760

If companies are unable to arrive at firm decisions, the Division of Engineering will have no other recourse than to recommend their appearance before the Board to show cause why applications should be approved.

Very truly yours,



James F. Shea
Engineer
Industrial Waste Section

JFS:mj

cc: Water Pollution Control Board
cc: Adam L. Wesner
cc: Don Seeds

SCM

000761



CABOT TITANIA, INC. P.O. BOX 160, ASHTABULA, OHIO 44004

CABLE ADDRESS "CABLAKE" ASHTABULA
AREA CODE 216 997-5501

December 30, 1970

Mr. G. A. Hall
Engineer Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216

Dear Mr. Hall:

Enclosed is our application for renewal of Permit No. 1824.8 for the discharge of industrial wastes and sanitary sewage from our Titanium Dioxide Unit into Fields Brook.

Regarding application for renewal of our present permit for discharge of wastes and sewage from the Titanium Dioxide Unit, we are in compliance with Condition 2 through 6 outlined in Dr. Arnold's letter of August 20, 1970.

Because the feasibility study on the combined terminal treatment facility is not expected to be complete until January 31, 1971, we have not complied with Condition No. 1. We intend to do so as soon as the results of the study are made available to us and a comparison between joint and individual treatment is made.

In August 1970 we completed all of the modifications to the settling ponds and have installed the spare pump at the chemical sump as outlined in our letter to Mr. G.A. Hall of May 11, 1970. We therefore have complied with all of the conditions for renewal of the existing permit as outlined in Dr. Arnold's letter of October 15, 1970.

Very truly yours,

Fred R. Mohrmann
Plant Manager

SCM

FRM/pk

SCM

000762

(Do Not Write In This Space)

Application No. _____
Date Received _____

(Do Not Write In This Space)

Permit No. _____
Date of Board Action _____

WATER POLLUTION CONTROL BOARD
DEPARTMENT OF HEALTH
STATE OF OHIO

**RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES,
OR OTHER WASTES INTO WATERS OF THE STATE**

Please read carefully instructions on reverse side of this application before filling out.

1. Name Cabot Titania Incorporated
2. Location Middle Road, Ashtabula, Ohio
3. Type of Establishment (if not a political subdivision) Chemical Manufacturing
4. Type of Discharge Industrial Wastes and Sewage
5. Body of Water Receiving Discharge Fields Brook
(a) Next larger receiving tributary Ashtabula River - Lake Erie
6. Is Discharge Treated? --- Yes XX No _____
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit
(No. 1824.8).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board.
Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official _____
Title Plant Manager
Post Office Address P.O. Box 160
Ashtabula, Ohio 44004

VERIFICATION

FredR. Mohrmann, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to and subscribed in my presence this _____ day of _____, 19____,
at Ashtabula, County of Ashtabula And State of Ohio.

Signature of Officer _____
Official Title Notary Public, Ashtabula Cty., Ohio
Commission Expires 7/12/73

State of Ohio

Address Reply to:

G. A. Hall
Engineer-Secretary
450 East Town Street
P. O. Box 118
Columbus, Ohio 43216



EMMETT W. ARNOLD, M.D.
Chairman
J. GORDON PELTIER,
Vice Chairman
FRED E. MORR
JOHN M. STACKHOUSE
BARTON HOLL
SHARON D. BRESLER

Department of Health Water Pollution Control Board

Re: Ashtabula County
Ashtabula Township
Ind. Wastes-Sew.

November 13, 1968

Cabot Titania Corporation
P. O. Box 160
Ashtabula, Ohio 44004

Attention Mr. Edward J. Holland, Manager

Gentlemen:

Enclosed is renewal permit for the discharge of industrial wastes and sanitary sewage from your Titanium Dioxide Unit into "waters of the state" pursuant to the provisions of the Water Pollution Control Act and to the statement of policy of the Board dated February 24, 1953.

You will note that this permit expires July 1, 1969. Renewal of this permit is contingent upon compliance with the following conditions:

1. Continue the in-plant improvements to further reduce critical constituents in the plant effluent.
2. Provide satisfactory maintenance and operation of existing facilities for the treatment and disposal of industrial wastes and sanitary sewage in accordance with approved Water Quality Standards.
3. Submit to the Division of Engineering, at regular monthly intervals, reports to include information regarding flow volumes and pertinent analytical data on the industrial waste discharges.
4. Promptly report to the Division of Engineering the occurrence and cause of any accidental or intermittent discharges of wastes which may have a deleterious effect on the receiving stream.

SCM

000725

Cabot Titania Corporation
Titanium Dioxide Unit

-2-

November 13, 1968

5. Submit to the Division of Engineering information pertaining to any plant expansion or process changes which may affect the character of the industrial waste discharges, together with a proposal for providing controls for such discharges so that there will be no deleterious effect on the receiving stream.
6. Submit to the Division of Engineering by March 1, 1969, a report regarding the quality of the plant effluent, with particular emphasis on meeting the requirements for industrial Water Quality Criteria as established by the Water Pollution Control Board's Resolution adopted October 10, 1967 (copy enclosed).

Should you have any questions with respect to the above conditions, please notify us promptly.

Yours very truly,

E. W. Arnold, M.D.

E. W. Arnold, M.D., Chairman
Water Pollution Control Board

Enc.-Permit 1824.6

Certified mail

cc: Health Commissioner
cc: District Office

SCM

000726

5673

STATE OF OHIO

Permit No. 1824.6

DEPARTMENT



OF HEALTH

Date issued - November 13, 1968

Expiration Date - July 1, 1969

WATER POLLUTION CONTROL BOARD

COLUMBUS

This certifies that

Cabot Titania Corporation

Titanium Dioxide Unit

Ashtabula Township, Ashtabula County, Ohio

has been granted permission to discharge industrial wastes and sanitary sewage

into waters of the state, Field Brook - Ashtabula River, under authority of the Ohio Water Pollution Control Act,

Sections 6111.01 to 6111.08 Revised Code of Ohio, until the expiration date indicated hereon. Renewal of this permit is subject

to the conditions prescribed by the Water Pollution Control Board as contained in the letter transmitting this permit.

This permit is subject to modification or revocation.

Application for renewal, re-issuance or extension of this permit

shall be made not less than 30 days prior to the expiration date.

WATER POLLUTION CONTROL BOARD

E. W. Arnold, M.D.

CHAIRMAN

000727

D R A F T

Job NY-4978
December 13, 1962
Page 1

Industrial Sewer Effluent (Summer Conditions)

<u>Source of Industrial Waste</u>	<u>Quantity</u>
1. Cooling Water direct to storm sewer	3,800,000 normal Gal/Day 4,400,000 max. Gal/Day
2a. Water treatment plant discharge to settling basin	27,000 Gal/Day
2b. Water treatment plant discharge to storm sewer	10,000 Gal/Day
3. Boiler blowdown to storm sewer	7,200 Gal/Day
4. Process effluent as discharged to settling basin	200,000 Gal/Day
5. Discharge from settling basin to storm sewer	227,000 Gal/Day
6. Aerobic Digestion Unit discharge to storm sewer	7,000 Gal/Day
7. Total discharge from plant	4,051,000 normal Gal/Day 4,651,000 max. Gal/Day

SCM**000903**

November 9, 1962

Dr. T. H. Goodgame
Cabot Corporation
Billerica Research Center
Concord Road
Billerica, Massachusetts

Dear Tom:

Work Order 01-10

I am enclosing a copy of the expected effluents from the boiler, the sodium zeolite water softener and the demineralizer unit. You requested this information before you approached the State of Ohio.

Please look this over and see if you will require any further information.

Sincerely yours,



F. D. Eckman

FDI:aa
Attach.

cc: RPV
PR

SCM

000804

Waste Water.

Boiler Blowdown.

Flow continuous. 7000 #/hr.

with mytr of 11-9-62
to THG.

Composition

Calcium	- 700 ppm.
Magnesium	- 250 ppm.
Sodium	- 650 ppm.
Sulfate	- 715 ppm.
Chloride	- 740 ppm.
Phosphate	- 40 ppm.
Silicate	- 25 ppm.
pH	- 11.0.
Turbidity	- 50 ppm.

Waste from Sodium Sulfate Plant.

Backwash - 1000 gallons - of clarified water with 3014 ppm
of turbidity. rate 100 gpm.

Brine injection 1570 brine
194 gallons.
13 gpm
15 minutes

Rinse 1210 gallons
25 gpm
35 minutes

000905

SCM

Shuts off with same brine and at end of run will be clarified
water. The above is per exchange back every 32 hours.

SCM

000906

5.300 gallons
10 minutes
Backwash 2.5 gpm.
Clarified water with a small amount for pumping turbidity

Carbon Dioxide Densitometry

The viscosity turbidity
small amount of Alumina
small amount of Alumina
small amount of Alumina

Flow - 55 gpm.
Time - 4 minutes
Frequency - every 2 minutes
Flow will be clarified water

Coagulator

Each filter will backwash every 8 hours.

Flow 1178 gpm average
Time 4.5 minutes

Turbidity.

5.300 gallons per back with each filter
The 5.300 gallons is clarified water with a small amount of
Filter plant back wash water.

000907

SCM

After by alkaline and end up acid.

15 gallons

24 m/mk

Remer. 6.5 gpm

320 gallons

41 m/mk

6.3 gpm of 1% Na₂CO₃

Injection of H₂CO₃

acid.

This backwash water is the effluent from lithium acetate which is acid with small amounts of ferrous hydroxide and hydrogen

15 gallons

10 m/mk

Back wash 18.5 gpm

Flow section of demineralizer

of ferrous hydroxide and sulphuric acid.

After of. alkalies acid and wash up acid with small amounts

420 gallons

21 m/mk

2.3 gpm

370 gallons

41 m/mk

1.3 gpm of 2% sulphuric acid.

Acid 10/10/10

Kind fast.

28 gpm
36 minutes

1000 Gallons
Also is Calcium hydroxide

Each tank is 10 gpm on each every 12 hours.
Each tank is 10 gpm on each every 12 hours.

Composition of Chloride water

Calcium	31 gpm.
Sulfuric acid	9 gpm
Sodium	27 gpm.
Carbonate	24 gpm
Chloride	15 gpm.
Acetate	29 gpm.
pH.	10.4

This is the best approximation I can make since the information given is based on the chlorine content for each plant.

W. E. 10/16/63.

SGM

000308

AUG 6 Rec'd



ENGINEERS AND CONSTRUCTORS FOR INDUSTRY

THE LUMMUS COMPANY

146-246 HAYNES AVE. NEWARK 5, N.J.

OT-10

August 3, 1962

Letter No. L-213

Mr. F. D. Heckman
Cabot Engineering Company
c/o The Lummus Company
Room 214E
146-246 Haynes Avenue
Newark 14, New Jersey

Dear Sir:

Subject: Lummus Job NY-4978
Titanium Dioxide Plant
Lummus Account: AD
Settling Basin

According to your request, we will increase the width of the interior roads on the settling basin from 10' to 12'. This will result in an additional cost and we will cover same with a change order.

The outside perimeter road around the settling basin will be left as 15' wide as presently contemplated.

Very truly yours,

THE LUMMUS COMPANY

C. A. Wolbach

C. A. Wolbach,
Project Manager

GWS:pah

cc: Mr. P. Rittenhouse - Pampa, Texas
Mr. R. P. Vail - Pampa, Texas
Dr. T. H. Goodgame - Billerica, Mass.

*This change requested verbally by
THG. in August 1962.*

C00809

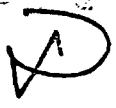
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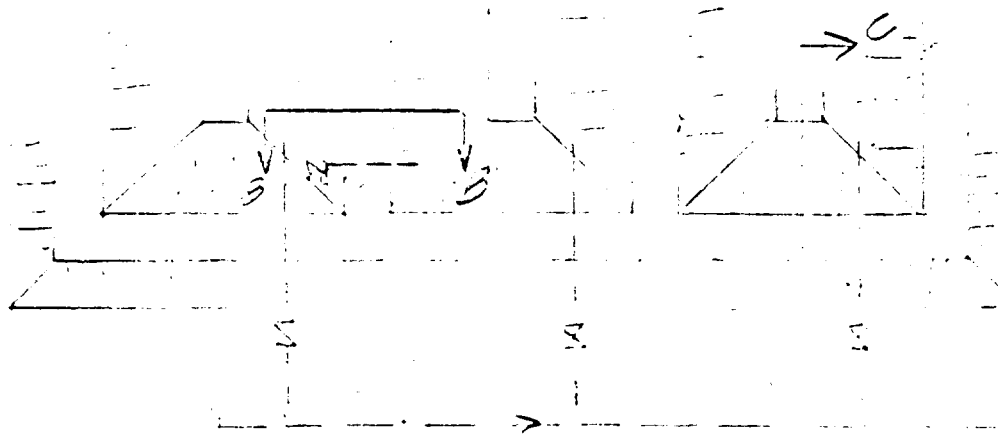
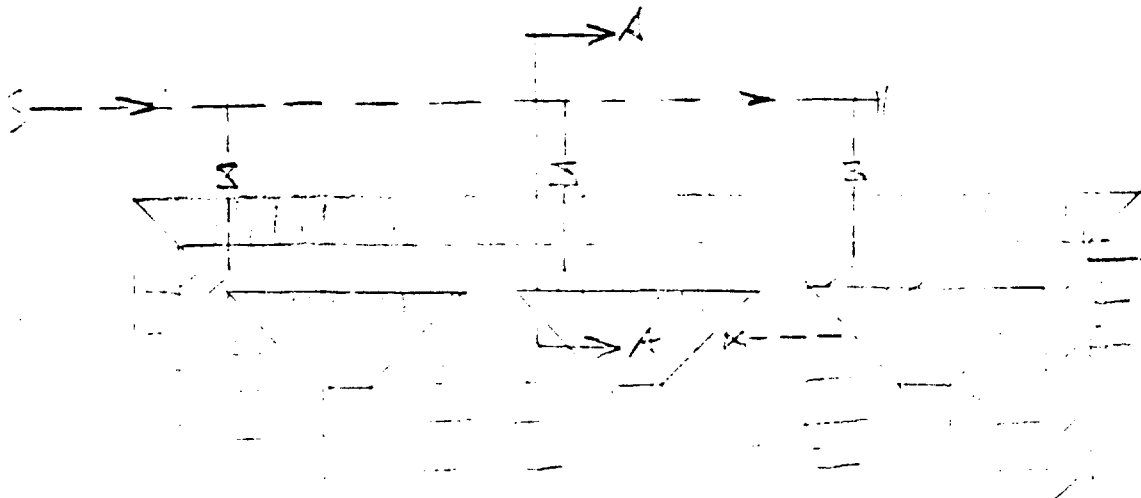
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OT-10



ALL DIMENSIONS ARE
GIVEN IN FEET AND INCHES ON DRAWING



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BY <u> </u> DATE <u> </u>	THE LUMMUS COMPANY	E. OR J. NO. <u> </u>
CHAS. <u> </u> DATE <u> </u>		SHEET <u> </u> OF <u> </u>
SUBJECT <u> </u>		



ENGINEERS AND CONSTRUCTORS FOR INDUSTRY

THE LUMMUS COMPANY

385 MADISON AVE., NEW YORK 17, N. Y.

REPLY TO: NEW YORK DIVISION

146 HAYNES AVE., NEWARK 5, N. J.

April 10, 1962

Letter No. L-124

Mr. F. D. Heckman
Cabot Engineering Company
c/o The Lummus Company
Room 214E
146-246 Haynes Avenue
Newark 5, New Jersey

Dear Sir:

Subject: Lummus Job NY-4978
Titanium Dioxide Plant
Lummus Account: General
Chemical Effluents

This is to record our understanding in regard to handling of chemical wastes which ultimately discharge into public waterways under Ohio State jurisdiction.

We are proceeding on the basis of the effluent handling systems as shown on our Drawing E 4978-22-4, "G" Issue.

According to your instructions, the process effluent is to pass through the settling basins and then discharge into the storm sewer where it will be diluted with cooling water. No other treatment is included.

See my letter # C-127 dated April 11th.

SCM

C00912

THE LUMMUS COMPANY

Mr. F. D. Heckman

- 2 -

April 10, 1962

Letter No. L-124

Wastes from the boiler and water treating plants will be handled as follows:

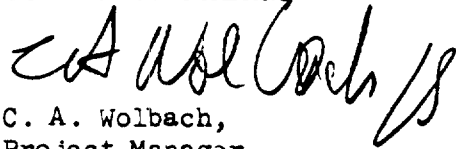
- 1) Coagulator sludge will be routed through the settling basins. No neutralization is contemplated.
- 2) Brine effluent from regeneration of zeolites will discharge directly into the storm sewer.
- 3) Acid and caustic effluent from regeneration of the demineralizers will be neutralized and discharged directly into the storm sewer.
- 4) Filter backwash will discharge directly into the storm sewer.
- 5) Boiler blowdown will discharge directly into the storm sewer.

In addition to the above, provisions are included for neutralizing any process unit acid drips prior to discharge into the storm sewer.

Since, according to our understanding, Cabot has assumed the responsibility for compliance with state water pollution requirements, your approval is requested so that we can proceed on the above basis with the job.

Very truly yours,

THE LUMMUS COMPANY


C. A. Wolbach,
Project Manager

GWS:gmh

cc: Mr. P. Rittenhouse - Pampa, Texas
Mr. R. P. Vail - Pampa, Texas
Dr. T. H. Goodgame - Billerica, Mass.

000913

SCM

000914

1003

All standard cable lines are to be used for the purpose of transmitting messages. The use of other lines is prohibited. The use of the cable lines is to be controlled by the cable office.

The cable office is to be responsible for the proper use of the cable lines. It is to be the duty of the cable office to see that the cable lines are used in accordance with the regulations.

The cable office is to be responsible for the proper use of the cable lines. It is to be the duty of the cable office to see that the cable lines are used in accordance with the regulations.

THE CABLE OFFICE
IS TO BE RESPONSIBLE FOR THE PROPER USE OF THE CABLE LINES.
IT IS TO BE THE DUTY OF THE CABLE OFFICE TO SEE THAT THE CABLE LINES ARE USED IN ACCORDANCE WITH THE REGULATIONS.

1003

Attention: Mr. C. L. Nichols

Room 5, New York
The Cable Office
New York

Room 5, New York
The Cable Office
New York

CANOE ENGINEERING COMPANY

Mr. C. A. Willock

-2-

February 8, 1962

Letter No. C-62

The drain lines in the P101, and P102, storage area and in the chlorine recovery area are to be of Daricon or equivalent. A small neutralization pit or pits will be provided, capable of handling 100 gallons of effluent plus the necessary chemicals for neutralization. Immediately following the pit or pits, there will be a cutoff valve of Daricon or equivalent followed by a cast iron drain leading into the regular drain main.

This confirms the verbal conversation had with your Mr. Steinko on February 7th.

Yours very truly,

CANOE ENGINEERING COMPANY



**F. D. Hoffman
Assistant Chief Engineer
Foreign Operations**

FTH:mas

**cc: EWC
EP7**

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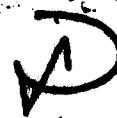
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ENGINEERS AND CONSTRUCTORS FOR INDUSTRY

THE LUMMUS COMPANY

385 MADISON AVE., NEW YORK 17, N. Y.

REPLY TO: NEW YORK DIVISION

146 HAYNES AVE., NEWARK 5, N. J.

February 2, 1962

Letter No. L-63

Mr. F. D. Heckman
Cabot Engineering Company
c/o The Lummus Company
Room 214 E
146 Haynes Avenue
Newark 5, New Jersey

Dear Sir:

Subject: Lummus Job NY-4978
Titanium Dioxide Plant
Lummus Account:
Chemical Effluent

This will record your advice to the effect that we are to plan on installing settling basins on the chemical effluent before combining it with the leaving cooling water.

We await your further instructions in this regard.

Very truly yours,

THE LUMMUS COMPANY

E. A. Wolbach

C. A. Wolbach,
Project Manager

GWS:aa

cc: Mr. P. Rittenhouse
Mr. R. P. Vail
Dr. T. H. Goodgame

Copy to THG & RPY

2-5-62

000918

SCM

January 18, 1962

Letter No. C-24

The Lummus Company
146 Haynes Avenue
Newark 5, New Jersey

Attention: Mr. C. A. Wolbach

Gentlemen:

OT-10

We are enclosing one copy each of a letter from Reactive Metals, Inc. dated January 12, 1962, the Ohio Water Pollution Control Board Legal Manual of 1961, a statement of policy from the Ohio Water Pollution Control Board dated February 24, 1953 and a supplement to the statement of policy dated March 17, 1953.

Yours very truly,

CABOT ENGINEERING COMPANY



F. D. Heckman
Assistant Chief Engineer
Foreign Operations

FDH:gas
Encs.

cc: THG
RPV

000920

SCM